

The Far Side of the Sky

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Pasadena, California

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Preface

In this collection of stories, I have recorded some of my adventures on the mountains of the world. I make no pretense to being anything other than an average hiker for, as the first stories tell, I came to enjoy the mountains quite late in life. But, like thousands before me, I was drawn increasingly toward the wilderness, partly because of the physical challenge at a time when all I had left was a native courage (some might say foolhardiness), and partly because of a desire to find the limits of my own frailty. As these stories tell, I think I found several such limits; there are some I am proud of and some I am not. Of course, there was also the grandeur and magnificence of the mountains. There is nothing quite to compare with the feeling that envelopes you when, after toiling for many hours looking at rock and dirt a few feet away, the world suddenly opens up and one can see for hundreds of miles in all directions. If I were a religious man, I would feel spirits in the wind, the waterfalls, the trees and the rock.

Many of these adventures would not have been possible without the marvelous companionship that I enjoyed along the way. Doug Hart was a frequent companion during the early adventures and I shall always count myself exceedingly fortunate to have traveled with him. Our spirits are forever bound together by the trials we faced together especially on the Mountain of the Devil. There were other companions too. Terry Jones was a most gracious host both in Oxford and on the slopes of Snowdon. In Japan, Yoichiro Matsumoto and Yoshi Tsujimoto were great companions. In Korea, I was touched by the watchful eye which Seung-Joon Lee kept on my wanderings.

Closer to home in California, my advancing years were graced by the company of a number of young fellow adventurers, among them Troy Sette who was born with the instinct for adventure, Clancy Rowley whose grace and kindness shone in all he did and Mark Duttweiler with whom hiking was always a pleasure. To Garrett Reisman who taught me to climb, I owe an enduring debt and the very best of good fortune in his adventures as a NASA astronaut. In later years, I was immensely fortunate to link up with the three more great companions, the Marquesa de Canyonette, Randi Poer, whose blithe spirit is reflected in several of these stories, Scott “Seldom Seen” Smith whose kindness is unsurpassed, and the “Magnificent Marine” John Perry, a man for all seasons.

I shall treasure all of their friendships for the rest of my days. To them and to all the others, I am deeply grateful. Most especially to Doreen whose love and friendship traveled with me to every corner of the globe.

Christopher Earls Brennen
California Institute of Technology, August 1999.

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Chapter 1

MOYOLA RIVER

*“I will break through,” he said, “what I glazed over
With perfect mist and peaceful absences”
Sudden and sure as the man who dared the ice
And raced his bike across the Moyola River.
A man we never saw.*

From “Glanmore Sonnets” by Seamus Heaney

In the early 1950s my father decided to construct a two-man canoe in which to paddle the waters of some bucolic Irish river. I think the inspiration for this was derived from a canoeing holiday that one of my uncles had enjoyed on a river in southern Ireland. Indeed my father seemed to have inherited the remains of my uncles collapsible canoe that consisted of a foldable canvas shell within which a frame of wooden rods was to be assembled. However, we never managed to complete this assembly and so my father decided to construct his own canoe that would not be collapsible. It would still be canvas on a wooden frame but a rigid rather than removable frame.

This new canoe was constructed in one of the attic rooms in our house. It was carefully fabricated and a few test paddles were nervously but successfully conducted in a nearby pond. After that my father’s interest waned and he moved on to other activities. However, a year or two later, I had just begun my lifelong adventuring with a hike over the top of Slieve Gallion (see “Flowers on the way to Slieve Gallion”). Casting around for more adventure, my friend Frank Johnston and I decided to see how far we could float down the nearby Moyola in the “new” canoe.

The Moyola was the only river of any size close to Magherafelt. Rising near Mullaghturk peak in the Sperrin Mountains, the Moyola winds its way through the rolling farmland of southeast County Derry for 27 miles before emptying into Lough Neagh. A little preliminary scouting revealed that the river upstream of the road bridge on the Tobermore/Maghera road (at 54° 47.150’N, 6° 41.903’W)



Left: Starting point: Tobermore/Maghera bridge. Right: Looking downstream from starting point.

was too shallow for reasonable canoeing and so we decided to put in at that point. We knew of several other road bridges further downstream and had reconnoitered the river from those vantage points; but we had little information on the river in between those viewpoints. Nevertheless, with the confidence of youth, we decided that we knew enough. Therefore, in the early summer of 1959, we began preparations for this canoeing adventure into the unknown. What attracted me to this exploit, indeed to all the adventures in the fifty plus years that followed, was precisely the thrill of venturing into the unknown, of finding out what was round the next corner or over the next hill and of meeting the challenges that followed.

Having obtained my father's approval to use his canoe and his willingness to deposit us at our starting point, we began collecting the gear we would need. Food and water were obvious. But we also knew that the canvas surface of the canoe was not particularly rugged; it could easily be penetrated if we made contact with rocks in the shallower parts of the river. Fortunately, we knew of adhesive and waterproof bandage tape called "Elastoplast" that my father made valuable use of in his doctoring activities. We obtained a liberal supply of Elastoplast and set off one Saturday morning for the Tobermore/Maghera road bridge (at $54^{\circ} 47.150'N$, $6^{\circ} 41.903'W$).

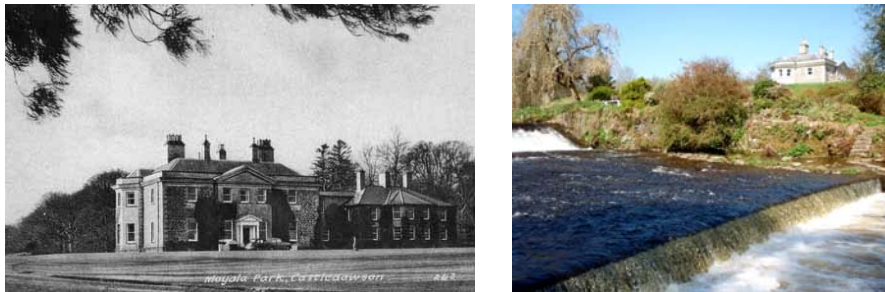
I do remember the mild but exciting apprehension with which we slid the loaded canoe into the water downstream of the Tobermore/Maghera road bridge in preparation for departure. It was a beautiful, sunny Irish day. To the west of us the heather-encrusted Sperrin Mountains glowed purple in the sunlight and all around the lush green fields seemed to welcome us. As long as rain and misfortune stayed away it promised to be a glorious day. We bade goodbye to my father (who must have wondered if he would ever see his canoe again) and started downstream, Frank in front and me behind. Not much paddling was needed but we soon encountered the first of many small rapids, some of which we needed to wade in order to negotiate. Inevitably the first rip in the canvas occurred, the Elastoplast came out and the canoe received its first badge of honor. On we drifted with kingfishers flashing past us and startled herons rising majestically before us. Though farm fields lay all around I don't think we



Left: Curran bridge. Right: Upstream of first weir.



Left: First weir. Right: Weak bridge.



Moyola House and its weir.

saw a single person all day long. The river was its own sanctuary and we felt we should slip respectfully through this ribbon of near-wilderness. More riffles were encountered and negotiated but the bottom of the canoe began to look like a canvas war-zone; the Elastoplast supply was dwindling fast. We passed the junction with the Grange Water river at $54^{\circ} 47.990'N$, $6^{\circ} 36.486'W$ and pressed on downstream.

Several hours into our adventure and just beyond the Grange Water junction, we came to the lovely old Curran bridge, named after the nearby hamlet that recorded a population of 130 in the 2001 Census. A beautiful old stone, four-arch bridge carrying a single lane across the Moyola (at $54^{\circ} 47.980'N$, $6^{\circ} 36.758'W$),

the Curran bridge must date back at least to the 1800s if not before. Instantly recognized, we floated through it relieved to know where we were. The river was now fuller and easier to traverse. However, a little over 1/4 mile downstream of the Curran bridge we came to an old weir or dam (at $54^{\circ} 47.785'N$, $6^{\circ} 35.115'W$) that dropped about 6ft in two stages. Throughout Ireland (and indeed Europe) dams like this were built in conjunction with a race, a diversion of part of the flow used to drive a water wheel and mill to process the local agricultural produce. They represented the first mechanization, the first industry, and were an essential and fundamental step in the development of civilization. The sluice gate that regulated the flow into the race of this first weir is still extant though overgrown and long forgotten. During our long-ago adventure this weir was our first significant obstacle and initially us caused some trepidation. But it was easily portaged and we were soon on our way.

Not far downstream of that first weir we found ourselves surrounded by woods. Indeed, until the middle of the 1700s, this whole region of County Derry was a dense forest, celebrated for being the haunt of wolves. The last wild wolf is reputed to have been killed in the middle of the 18th century. Part of that forest was obtained by the settler Thomas Dawson in 1633 and became the private domain and estate of the Dawson family who called it Moyola Park. As with many of the private estates of the landed aristocracy in Ireland, a substantial stone wall was built around this domain in the 1800s. The purpose was twofold - to clearly define that estate and to provide some employment and relief during the terrible years of the famine. Most of these tall stone walls remain. While the relief they provided is long forgotten, their stark statement of segregation still resonates, still generates inevitable resentment.

On that day in 1959, we did not know when we entered Moyola Park and the demense of the Dawsons for there was no stone wall across the river nor any other sign of the boundary (modern GPS tell us that boundary was at $54^{\circ} 47.510'N$, $6^{\circ} 34.115'W$) along our route. We did suspect that we had entered grounds where we were not welcome but it was still a surprise when we suddenly found ourselves floating past the manicured lawn at the foot of a great mansion. We ducked down to reduce the possibility of being seen as we floated by, trailing streamers of Elastoplast in our wake. My mother would have been mortified if she had known where we were!

The great house in Moyola Park, the seat of the Dawson family, was built in 1713 by Joshua Dawson who was the Chief Secretary of Ireland in 1710. Both the house and the adjacent village became known as Castledawson. Joshua's descendant, George Robert Dawson (1790-1856), son of Arthur Dawson, was born at Castledawson, and married Mary Peel, the daughter of the British Prime Minister, Sir Robert Peel. Their son, Robert Peel Dawson (1818-1877), was the father of Mary Dawson, who became the heir to the Moyola estate. Mary was the great-grandmother of the brothers James Chichester-Clark (1923-2002) and Robin Chichester-Clark (1928-) who grew up in Moyola Park. Robin was the MP for Londonderry in the British House of Commons from 1955 until 1974. After an army career, James retired to Moyola Park in 1959. He was a member of the Northern Ireland Parliament for South Londonderry for 12 years

beginning at the by-election to replace his grandmother Dehra Parker in 1960. James went on to become the penultimate Prime Minister of Northern Ireland. He married the widowed Moyra Haughton (they had two daughters). In the aftermath of his political career James was created Lord Moyola in 1971 and died in 2002. Though the father of James and Robin Chichester-Clark died in 1933, their mother, Marion Caroline Dehra Chichester-Clark, lived at Moyola Park until she died in 1976.

Therefore, as far as I can tell, at the time of our adventure in 1959, the Moyola Park mansion was occupied by the 55-year-old widow, Marion Chichester-Clark, though her son, James, would shortly be moving in with his family. Of course, neither Frank nor I had any clue as to who lived in the great house that neither of us had ever seen before. But the drift of the river and the need for silent passage left us little alternative but to slip past as quietly as possible. Just a few yards beyond the house, the Moyola encounters its second weir (at $54^{\circ} 47.014'N$, $6^{\circ} 33.634'W$), a larger drop than the first weir. We portaged around this on the right-hand side, the side furthest from the house that, I believe, was now out of sight. Continuing downstream through the woods, we negotiated several small rapids before signs that we had left the park were encountered. Soon we came upon an old, somewhat familiar single-arch bridge ($54^{\circ} 46.749'N$, $6^{\circ} 33.407'W$).

This stone bridge over the Moyola connects Castledawson village to the wooded Dawson demense. Built in 1796 by Joshua Dawson, it replaced an earlier wooden bridge that was carried away by a flood in 1795. It has a single arch spanning 116ft, once the widest single span bridge in Ireland. Today that bridge is signposted "Weak Bridge" presumably because the arch would have difficulty supporting heavy modern vehicles. At that time in 1796 the road leading down to the Weak Bridge from the village (Bridge Street) was the main road to the neighboring village of Bellaghy, a few miles to the northeast. But to preserve their privacy when they built the enclosure wall around their property in the mid-1800s, the Dawsons diverted that route around the outside of their domain. The present Castledawson/Hillhead road bridge over the Moyola was built at that time.

By the time we passed under the Weak Bridge we, too, had been weakened by the struggles with the weirs and other small rapids. It was also getting cold as night approached. Moreover, our supply of Elastoplast was now completely exhausted and the bottom of the canoe was beyond repair. I remember struggling unnecessarily with one small rapid where the canoe drifted sideways and filled with water. It was time to end the adventure. The next bridge just a short way downstream of the Weak Bridge was the road bridge carrying the Castledawson/Hillhead road (at $54^{\circ} 46.733'N$, $6^{\circ} 33.134'W$) and here I climbed up to the road, found a telephone and called my father to ask him to come and get us. I recall he was none too pleased with the soaking wet load he had to transport home; nor was he pleased with the condition of the canoe. But it had experienced an adventure greater than that for which it was built - and given us a taste for adventure that would last a lifetime.

Frank went on to college in England and to establishing a business in South

Africa and Malawi. He became well-known for his photographs of those countries and for his unofficial diplomacy. His book of photographs of Malawi entitled “Malawi. The Warm Heart of Africa”, became Malawi’s window on the world. He once asked me to circumnavigate Lake Malawi with him on a photographic expedition but other commitments prevented me from accepting his marvelous invitation. I dearly wish I been able to accept for we were fellow travellers in the realm of adventure.

Chapter 2

INTO THE WILDERNESS

*“With a host of furious fancies
Whereof I am commander,
With a burning spear, and a horse of air,
To the wilderness I wander.
By a knight of ghosts and shadows
I summoned am to tourney
Ten leagues beyond the wide world’s end.
Methinks it is no journey.”*

From “Tom O’Bedlam” (17th century, anonymous).

On Christmas Day, 1983, at our temporary home on South Holliston Avenue in Pasadena, Doreen, the children and I were celebrating our traditional family Christmas. I do not recall anything that would allow my memory to separate that day from dozens of other delightful Christmases except for one thing. Instead of the traditional gift from under the Christmas tree, at the conclusion of that ceremony, Doreen, Dana, Kathy and Patrick wheeled in a brand new mountain bicycle. It was, perhaps, the best Christmas gift I ever received. The timing was perfect for I had had my eye on one of these new bicycle designs and was, at the same time, looking for a form of exercise that would not only improve my health but also be fun. It was a brand new Schwinn Mirada and seemed to require virtually no effort to propel. Shortly thereafter I began to make short trips into the nearby San Gabriel mountains. For the first few months I would impose upon Doreen to give me a ride up the tortuous road to Mount Wilson and, from there, I would ride down one of the two fire roads to Pasadena. Later I began to venture onto the various trails around Mount Wilson and into the canyons of the several forks of the San Gabriel river. During the week I would pour over my maps of the mountains, plotting out my next trip, making sure of the distances and the elevation changes. As my horizons widened, and my ambitions grew, one particular adventure began to intrigue me. I had, on several

occasions, ridden some distance on a trail up the East Fork of the San Gabriel River starting at the end of the road above Azusa. I noticed on the map that this canyon ran almost the whole way through the San Gabriel range. Indeed if one climbed up the Blue Ridge above Wrightwood on the northern side of the mountains then one could drop down from Vincent Gap into Vincent Gulch and, from there, into the canyon of the East Fork of the San Gabriel. My map indicated a trail through this canyon that one could follow all the way to the south end and thus emerge onto the road above Azusa. I recognized that this would be a very ambitious traverse but I reasoned that, if I started early and had the advantage of a downhill ride the whole way, then I should be able to make it. Circumstances were to prove otherwise.

Thus it was that very early on the morning of Saturday, Nov.11, 1989, Doreen and I set off for the Angeles Crest Highway that winds for about fifty miles along the spine of the San Gabriel Mountains. From La Canada Flintridge we climbed about 5000ft through the morning haze, past Red Box junction that had so often been my drop-off point and on to Charlton Flats, the Chilao Visitor's Center and Newcomb Ranch. I knew that Doreen was getting a little impatient as we climbed further and deeper into the mountains. Finally, when we reached the 7018ft Cloudburst Summit about 9.00am, I felt that I had reached a good starting point. So I turned the car around for Doreen, unloaded my bicycle and we parted ways, Doreen to return home and I to continue along the Angeles Crest Highway.

The air was crisp and filled with the morning scent of the pine trees as I rode along this beautiful road in the sky. Several gentle descents and ascents took me past the Eagles Roost and through the Mount Williamson tunnels to Islip Saddle where a precipitous road once connected with Route 39 coming up from Azusa. The road between Islip Saddle and Crystal Lake having been wiped out once too often by floods and earthquake-generated land slides, the State had given up trying to maintain that section and had allowed it to return to its natural condition. During previous adventures, I had navigated the remains of this route on my bicycle. This time my objective lay further along the Angeles Crest Highway and so I began the climb from Islip Saddle, past Mount Hawkins and Throop Peak to Dawson Saddle, at 7903ft the highest point on the Angeles Crest Highway. At Dawson Saddle I had come about 11 miles from my starting point at Cloudburst Summit. From there it was a swift and exciting ride of about 3 miles down to the 6560ft trail junction at Vincent Gap that I reached at about 11.30am. There I paused for lunch and reflection before continuing the next stage of my planned trip. Already I was somewhat apprehensive about the limited amount of daylight remaining. However I reasoned that, provided the trail that appeared on my map existed (and I had no reason to think that it did not for the map had proved reliable elsewhere), I should be able to reach civilization again before dark.

With eager anticipation, I left the road at Vincent Gap, following the trail that drops fairly steeply down Vincent Gulch toward the Mine Gulch junction. This is rugged, forested country and, during the descent, I entered the Sheep Mountain Wilderness, the home of a substantial herd of Nelson Bighorn Sheep

and a number of bears and cougars. The forest was a mix of conifers and deciduous trees whose autumn colors added to the spectacular scenery. The 9399ft Mount Baden-Powell formed a dramatic western wall to the canyon. About a year later I climbed this mountain, named after the founder of the Boy Scout movement. In the register at the summit I placed this message:

“Oct.6, 1990. In memory of my father Wilfred M. Brennen (1911-1987) who, as Chief Commissioner of Scouting in Northern Ireland, worked tirelessly to reduce sectarian violence by bringing together Catholic and Protestant youth within the Scouting Movement. Today he would have been 79.”

Though steep the trail was mostly rideable and I made fairly good progress with only the occasional need to carry my bike. I paused a number of times to admire this beautiful land. After a descent of about 2000ft from Vincent Gap, I emerged onto a flat area of sand and rock, the 4500ft Mine Gulch junction where Vincent Gulch, Mine Gulch and Prairie Fork all meet before the sum of their contents plunges into the canyon of the East Fork of the San Gabriel River. Another trail drops down to this junction from the Cabin Flat campground on Prairie Fork; it used to be possible to reach Cabin Flat campground by car using a dirt road from the Blue Ridge above Wrightwood. Indeed as I approached the Mine Gulch junction I came upon two young men who had hiked down Prairie Fork from Cabin Flat. They seemed truly amazed when they spotted me riding my bicycle towards them and looked at me with even greater astonishment when I told them of my destination.

It was shortly after leaving Mine Gulch junction and entering the East Fork canyon that I realized that I might be in some difficulty. First, it rapidly became obvious that the nice red line on my map that indicated a trail through this canyon was entirely fictitious. If there had ever been such a trail all traces of it had long been obliterated by the winter torrents that crash through this canyon. Second, time was marching on and, with only a few more hours of daylight left, it was clear that I would not be able to make my way out of this wilderness before nightfall. For the moment there was little choice but to press on. It would have taken me several hours to climb back up the way I had come and, after all, there was always a chance that a good trail would suddenly appear at some point further downstream. The terrain was now even more rugged and precipitous. The mountains on both sides had closed in, forming a canyon with unscaleable walls and a rock-strewn bottom. The river in the canyon was a substantial stream with alternating quiet sections interspersed with chaotic rapids. In many places it was necessary to carefully select a route by which to descend amidst waterfalls and large canyon-filling boulders. It was slow going, carrying or dragging a bicycle that, in several places, needed to be lowered by rope ahead of me. In still other places the canyon bottom was entirely overgrown with young saplings (alders?) that could only be penetrated with great difficulty. It was, indeed, a rugged wilderness.

I did attempt to keep track of my location but landmarks were rarely visible from the canyon bottom. Glimpses of the 8009ft Iron Mountain immediately to the east of the canyon did however allow some estimate of my position. As the light began to fade I guessed that I was somewhere in the vicinity of Fish Fork

at an altitude of 3400ft and about 7 tough miles from Vincent Gap. Ahead of me I still had two very hard miles of rugged canyon before connecting up with the trail that I knew led south from the “Bridge to Nowhere”, about which more later. Each time I turned a corner in the canyon, I kept hoping that I would see this imposing bridge but my calculations told me it would not be possible to reach it during the available daylight. The temperature had begun to fall and, since I was soaking wet from having traveled in the stream, I began to get cold. Moreover, both bicycle tires had gone flat probably because of water in the valves and they needed to be repaired. All of these factors clearly indicated that I should find a comfortable place to spend the night. It would be very dangerous and quite impossible to press on in the dark. Any injury caused by a fall could turn the situation from serious to critical. Yet, it took all the will-power I could muster to make myself stop and prepare for the night. Panic was a powerful force causing me to keep going. But common sense finally prevailed and I chose a spot on a sandy bench where I built a rudimentary stone fireplace. Dry, downed logs were abundant nearby and I soon had a substantial fire going. I was immensely thankful to Doreen for adding a small butane lighter to my bicycle kit only a few weeks before. In retrospect it is clear that this lighter saved me from a very threatening situation and made it possible for me to make it through the night in relatively good shape.

Once the fire was going I began the time-consuming but important task of drying my clothes and shoes. This took about two hours but I was able to complete the task before it became too cold. As it turned out the weather was very mild for November and the temperature did not fall too far at anytime during the night. At the end of two hours I had clothed myself in every garment I had with me and was reasonably dry and comfortable. During the drying process the only mishap was a slightly burnt sock, now missing part of its sole. I scooped out a place in the sand right next to the fire and lay down for the night. Though I was not able to sleep, I was able to rest in a warm and fairly comfortable position. For most of the night the moon was quite bright and I could look up and see the stars and the occasional airplane passing high overhead on its way to Chicago, New York, or dozens of other destinations. I reflected upon whether I would rather be down here or up there in one of those aluminum cigars and I was not entirely sure I knew the answer. Most of all, the night was extremely boring. I tried to resist looking at my watch every five minutes and eventually was able to stretch the interval to every twenty minutes. Many, many times I attempted to relieve the boredom by intricate planning of my remaining resources. In this regard, the most critical resource was water. I had about a pint of orange juice and a pint of water remaining. I decided to consume the orange juice through the night, saving some for “breakfast”, and to keep the water for the next day. Though I was fairly sure the stream water was safe in such a remote region as this, I did not want to risk drinking it until it became necessary, primarily because I feared illness. I did have a little food left in the form of two small packs of crackers and cheese (the kind available in vending machines) and two pieces of Doreen’s shortbread. Before settling down I dined on one pack of crackers and cheese and one piece of shortbread downed with



Left: Prairie Fork junction from Big Horn Mine. Middle: In East Fork Narrows. Right: Bridge to Nowhere.

orange juice. The other pack of crackers and cheese provided my breakfast and I kept the final, sugar-laden piece of shortbread as emergency glucose rations.

So I was reasonably comfortable in the middle of the Sheep Mountain Wilderness. On the other hand, back home in Sierra Madre, Doreen became increasingly alarmed as the sun set and the evening wore on without any word from me. I had told her that I would call once I emerged from the canyon and that I would need a ride home from Azusa. When no such call came by about 9.00pm, Doreen concluded that something had gone wrong, and she rightly felt that she had no choice but to call the sheriff and the mountain rescue team. Fortunately, I had given her a quite explicit description of the route I was going to take. So when she finally reached the appropriate office within the Sheriff's department, she was able to provide them with an accurate description of my route. They told her that there was little they could do before morning, but they were organizing two search teams, one that would start down the trail from Vincent Gap, and the other would set off up the trail from the East Fork Ranger Station. These teams would probably be ready to start about 10.00am the next morning. In the meantime, they said they would call her every hour or so to let her know whether there had been any developments. It was a truly agonizing experience for Doreen, and the aspect of the whole adventure that I regret most is that I caused her this pain.

As soon as light began to penetrate the canyon, I consumed my meager breakfast and made preparations to resume my journey. I inspected the tires of the bicycle and decided not to use the spare inner tube until I reached a rideable trail. Finally I doused the fire, and set off down the canyon. The going continued very rugged indeed but I began to detect signs of human passage and then encountered a substantial canyon junction where there were clear signs of human activity. This I assumed was Iron Fork (3200ft); I recognized the flattened area where gold miner George Trogden had his camp at the turn of the century. George was well known for his hospitality to all who passed this way. Occasionally things got out of hand as on Christmas night, 1917, when the gunslinging gold miner John Portwood shot and killed miner Herman Miller

after a poker game. Indeed the East Fork of the San Gabriel river was the site of a gold rush during the latter part of the 19th century after the precious metal was discovered there in 1855. Below Iron Fork, the canyon is dotted with mines and the remnants of tailings. Even today several prospectors still live and work in the canyon while a number of weekend panhandlers take out a few dollars worth of the gold for several hours work.

Below Iron Fork a rudimentary trail became detectable and I began to encounter other hikers traveling in both directions all of whom were more than a little surprised by my bicycle. Though I had begun the morning feeling quite fresh I did notice that my strength began to ebb quite quickly and it became harder and harder to lift my bicycle. I started to debate whether I should abandoned my much-loved vehicle but, apart from my sentimental attachment to it, I also realized that once I reached the Bridge to Nowhere it would be easier to ride from that point on than it would be to hike. So I pressed on. Toughest of all was the fact that, in several places, the trail climbed the canyon wall in order to get around waterfalls; it was becoming very hard to find the strength to negotiate such obstacles. Finally, however, after one such ascent, part of the way up the west wall of the canyon, I turned the corner and there was the bridge. My relief was tangible for I knew I had the capability to ride from here down to the trailhead and the ranger station.

The Bridge to Nowhere is one of the most bizarre artifacts to be found in the San Gabriel mountains. Back in the 1920s, Los Angeles County planned to build a highway all the way up the East Fork canyon to the Mine Gulch Junction. From there the road would climb over Blue Ridge and drop down into Wrightwood. It would be among the most scenic roads in America. Construction began in 1929, most of the work being done by County prison work crews. By the mid-1930s the highway had reached The Narrows (2800ft) where the East Fork flows through a very deep gorge, the deepest in Southern California. There it was necessary to construct a concrete bridge high above the waters of the gorge. A tunnel was also chiseled out of sheer rock. However, the winter after this difficult construction task had been completed, an unprecedented storm arrived on March 1-2, 1938, depositing many inches of rain on the San Gabriel Mountains. The result was a tremendous flood that roared down the East Fork, obliterating everything in its path including more than five miles of the painstakingly constructed highway. Only the bridge was high enough above the waters to be virtually untouched. The futility of the project having been so emphatically demonstrated, the County abandoned their plans leaving a brand new concrete road bridge standing alone in the middle of the wilderness more than five miles from the nearest highway. It became a popular destination for hikers who dubbed it the "Bridge to Nowhere". Years later the County planned another highway up the East Fork. This time they intended to build it high up on the western wall to avoid a repetition of the earlier disaster. Begun in 1954, this second highway was abandoned in 1969 after only 4.5 miles had been built. That second effort left substantial scars up on the western wall. Hopefully that will be the last time man will desecrate this wilderness and it will be left for future generations to enjoy in its nearly natural state.

I reached the Bridge to Nowhere about 8.30am and, high above the rushing waters of the East Fork, sat down to summon my strength for the last leg of the journey through the wilderness. I could not help but admire again the spectacular Narrows gorge below me. There are two ways up the canyon at this point. One is to follow the trail up the canyon wall, cross the Bridge to Nowhere and then descend along a trail to the canyon bottom. That is the easy way though it is not obvious since the canyon makes several turns during this traverse. Those who fail to find the place where the trail takes off to climb to the bridge must make their way along the canyon bottom, a much more difficult route. I was glad that I had located the trail for I fear I would not have had the strength for the Narrows bottom route. After a few minutes, I turned my attention to the tires of my bicycle and was able to make sufficient repairs so that I could ride on two inflated tires. It was a great relief to be able to mount my bicycle for the first time in about 19 hours and thus to make fairly easy progress toward the trailhead, some five miles away. Despite the fact that the day hike to the bridge is fairly popular and therefore this trail is well traveled, the frequency with which it gets washed out means that it is quite rough in places. Indeed it crosses the East Fork perhaps a dozen times between the Bridge and the trailhead. Normally it is fun to ride through the stream at these crossings but, on this morning, it was more of an effort. I had consumed the last of my water on the Bridge and began to recognize some of the symptoms of dehydration and exhaustion, a slight sense of confusion and disorientation. But I felt that the situation was under control as I negotiated the last stream crossing, climbed the bank, and entered Heaton Flat where gold miner William Heaton set up camp in 1891 and prospected until his death in 1924. A few hundred yards more and I came to the locked gate at the trailhead parking lot. I had traveled 14 miles through the wilderness and a total of about 28 miles since Doreen had left me on the Angeles Crest Highway.

Though I had not given the matter much thought, I nevertheless half expected to find a welcoming party of some kind at the trailhead. Since no such welcome occurred, I guessed that Doreen had not called the authorities as I expected she would. But my first priority was the water fountain where I was surprised by how thirsty I was and consumed about a quart of water. I also filled all of my water bottles in preparation for what I anticipated might be a ride of as much as ten miles to the nearest telephone. The entrance to the ranger station is right beside the water fountain and, as I was filling my bottles, a ranger drove by in his pickup truck. I thought that he looked at me somewhat unusually but since he drove on I thought no more about it at the time. After a brief rest, I felt ready to resume my journey and so started off down the East Fork road. After about half a mile, I paused briefly at the junction with the Glendora Mountain Road for no special reason that I can recall. As I stood straddling my bike, the same ranger who had passed me earlier drew alongside and leaned over from the driver's seat to speak to me. He asked me whether I was Chris Brennen. In later retellings of the story I have sometimes claimed that I hesitated before responding and made a mistake in saying yes. In fact, I meekly responded in the affirmative, recognizing that I was near the end of my

resources and that I probably needed some help. Within moments it seemed as though I was surrounded by about four or five emergency vehicles. I realized later that they had been about to set off on their search for me, and that they were headquartered at Williams Camp, about a quarter of a mile down the road from where I had stopped. That accounted for the speed with which they appeared once they were notified by the ranger. I had little choice in the succession of events that followed. They took my bicycle away from me and made me sit down by the side of the road. There they did a quick check of my condition, taking my pulse, my temperature, and my blood pressure, in addition to checking my lucidity. Shortly thereafter they drove me down to Williams Camp for a more extended examination and debriefing. Someone brought me several small cans of orange juice that tasted very good indeed. They also called Doreen to tell her that I was safe and well and that she should come and get me at Williams Camp. Having determined that there was little wrong with me other than thirst they then quizzed me about how I had spent the night and about the condition of the trail, if any. In fact they did not seem to know a great deal about the canyon north of Iron Fork. Eventually, they left me to my own devices while they reviewed their own preparations for the rescue attempt. During this time I realized that they were virtually all volunteers who gave of their own time in the service of the search and rescue teams. I confess that several times it crossed my mind that I might get an enormous bill for their services. Fortunately I never did. I do, however, have a lasting appreciation for the work they do and for their thoughtfulness and generosity.

Doreen arrived with Patrick and drove me home to Sierra Madre. They were, perhaps, too relieved to express appropriate anger over my antics. I was very glad to see them and was almost asleep in the back seat by the time we arrived home. I slept for a while and awoke refreshed toward the end of the afternoon. I assumed that was the end of the matter. However, when I opened the local newspaper, the Pasadena Star-News, the next morning, Monday, November 13, a headline jumped out at me: "SHERIFF'S DEPUTIES FIND TWO MISSING CYCLISTS". The story, which is completely erroneous geographically, read:

"Angeles National Forest. Search teams from the Crescenta Valley Sheriff's station were called out to find two separate cyclists Sunday in the San Gabriel Mountains. Deputies found Christopher Brennan, 48, near Crystal Lake just before 10 a.m. Sunday, nearly 24 hours after his wife had dropped him off on San Gabriel Canyon Road above Azusa. Brennan reportedly misjudged the time necessary to make his trip and was forced to spend the night in the mountains. Later in the day.....".

So much for my notion that the adventure would pass unnoticed by those outside of my own family. When I got to my office, one of the secretaries, Jackie Beard, had made a big enlargement of the newspaper article and plastered it on my office door and elsewhere in the building. There was also a telephone message from the President's office asking me to call them. This I did quickly, trying to reassure them that I was both safe and sane. Later that day, I learned from a number of people that the story had been on the local radio. Indeed the story spread like wildfire through the Caltech community and I acquired a reputation

that I had no way of controlling. The legend grew in the telling; indeed, it seems to have been passed down in more and more exaggerated form from one generation of graduate students to the next. At a graduate student banquet about a year later, my students Steven Ceccio and Douglas Hart presented me with a special kit for future trips. This consisted of a fluorescent yellow hat and a bright red tee-shirt with the following message in large letters on the chest: "IF FOUND RETURN TO CALTECH". When I climbed Caltech Peak with Douglas several years later, I made a point of having my picture taken on the summit wearing this outfit.

So I come to the end of this story. For me it was not a particularly trying ordeal though it was undoubtedly traumatic for Doreen and Patrick. When I think about those 27 hours, I reflect on my gratitude to Doreen for a small butane lighter and for caring about me. But I am also discreetly proud that I was able to handle a difficult situation quite successfully.

Chapter 3

CALTECH PEAK

“.....so I used the moveto do a little course track for him. I know how, Skipper. I read the manual. It’s easy, just like we used to do at Caltech to chart star motion....”

From “The Hunt for Red October” by Tom Clancy.

In 1991, the California Institute of Technology, my place of work for many years, celebrated its 100th birthday. In July of that year graduate student Douglas Hart and I marked our own celebration of the centennial by climbing the 13,832ft Caltech Peak near the northern boundary of Sequoia National Park in California.

Caltech Peak became the official name of a mountain about 15 miles northwest of Mount Whitney in December of 1961. Previously unnamed, the peak came to be identified with the Institute as a result of a weekend climbing trip by Jim Eder ('65), Dick Jali ('55) and Ted Matthes ('55) who made the third recorded ascent on June 25, 1961, following the route that we took 30 years later. The three Caltech alumni were struck by the fact that three California schools had nearby mountains named after them, namely Mount Stanford (Stanford University), Trojan Peak (University of Southern California) and University Peak (University of California). So, after their return, they petitioned the Department of the Interior and the Superintendent of Sequoia and Kings Canyon National Parks. After some months of successful lobbying, Dick Jali was able to tell the Caltech community of the naming of the peak in a letter published in the January 1962 issue of Engineering and Science. Since that time a number of alumni, staff and students have made the ascent, and been rewarded by the magnificent view from the summit. There is no campus record of those ascents. But we do know of a number of members of our community who have made it to the top in the thirty years since it was named Caltech Peak. On Aug.16, 1964, Thor Hansen ('64) left a glowing description of Caltech in the summit register. Five years later Eric Jensen ('70) and Roger Jensen (ex

'71) reached the top on Aug.21, 1969, and they were followed a couple of weeks later by Volker Vogt ('64). James Greenfield, the director of corporate relations, and Dick Mooney from the business services office climbed the peak on Aug.19, 1970. Dale Dalrymple ('73) made the ascent on Sep.12, 1971, spent the night on the summit, and made his way along the ridge to Mount Stanford the next day. Margaret Schaefer was probably the first female member of the community to make it to the top. She climbed the mountain by the more difficult western approach on Aug.20, 1972, in the company of her husband, William P. Schaefer, then the Registrar at the Institute. Bill, who was probably the first faculty member to reach the top, reported on their experience in a November 1972 letter to Engineering and Science. He also climbed it for the second time in 1978. To my knowledge, the only other faculty member who made the climb prior to myself was Professor of Mathematics, David Wales, also at one time Dean of Students.

My own interest in attempting the climb was formed from several different motivational strands. In the preceding few years, I had taken up mountain biking and mountain climbing as a recreational pursuit and in an effort to regain my health after some years of neglect. I had gradually progressed to higher altitudes including climbs of Mount Baldy, Mount San Jacinto, and Mount San Geronio. The High Sierras beckoned next. But an additional motivation arose about 1989. Louis Wilde, then Master of Student Houses, knew of my efforts to recover my health and of my mountain-biking exploits in the San Gabriels. At one point during a conversation with Louis, I rashly claimed that I could ride my bicycle to the top of Mount Baldy, a claim that was met with ribald disbelief. I recall a comment to the effect that I was "too old and too fat" to accomplish that feat. When I was so quoted in a campus publication, Louis protested that he had been misquoted. What he had said was that I was "too old and too feeble" to make it to the top. To maintain my self-respect I had no option but to challenge these slanders. I thereupon issued a "Centennial Challenge" to Louis that ran as follows. If, as a Centennial celebration, I could make it with my bicycle to the top of (i) the 9,138ft Throop Peak in the San Gabriel mountains and (ii) the 13,832ft Caltech Peak in the Sierra Nevada then he, Louis, would have to meet me at the second location. I would bring my wife's battery-powered horse shears and would be permitted to give Louis whatever haircut and beard cut I so desired. Shortly after this challenge was accepted, I completed the first leg of my task in June 1990 and so recorded the fact in the register at the top of Throop Peak. Perhaps frightened by the possibility that I might actually succeed in the challenge, Louis had his hair and beard cut during the fall of 1990, and so greatly reduced the incentive for me to take my bicycle with me. In the end, I carried a symbolic, plastic toy bicycle that I left at the summit in recognition of my friendship with Louis. By that time I had also recognized the magnitude of the task of getting to the top of Caltech Peak even without a bicycle. Besides, bicycles are not permitted on the trails in the National Parks.

So it was that Doug Hart and I set off on July 23, 1991, to climb Caltech Peak and, perhaps, also Mount Whitney. We drove separately to Lone Pine where I

obtained a wilderness permit from the Mt. Whitney Ranger Station. A limited number of permits are issued each day for entry to the wilderness through each of the High Sierra trailheads. Permits for the Mount Whitney trail beginning at Whitney Portal must be obtained many months in advance. However, other trailheads are much less popular, and we had no difficulty obtaining our permit for the Symmes Creek trailhead to the Shepherd Pass trail, the next entry point north of Whitney Portal. After last minute shopping, we left Doug's car at Whitney Portal in order to allow us to exit the wilderness from that point, and then drove on up US 395 to Independence. From there we navigated a route over dirt roads to the 6000ft Symmes Creek trailhead using the High Sierra Hiking Guide by Winnett. Spending the night there, we were on the trail shortly after dawn on July 24.

The Shepherd Pass trail is a long and, at times, arduous climb of about 6000ft. It begins with a series of switchbacks that ascend to a saddle at 9000ft between the Symmes and Shepherd creek valleys. This saddle provided the first of many truly exhilarating experiences on the trip for, quite suddenly, there unfolds a breathtaking panorama of the 14,375ft Mount Williamson and the dramatic cliffs that surround it. The memory of this magnificence lingers long after one leaves the saddle and begins a brief descent into the valley of Shepherd Creek before the trail starts upward again.

After lunch at a stream-crossing below Mahogany Flats, we resumed our climb up the valley. For me that afternoon was, perhaps, the toughest leg of the whole trip for the sun was hot and I was still adjusting to the altitude. The climb up to and around a very large moraine blocking the valley was exhausting. Late in the afternoon, we both struggled into Anvil Camp which is perched among the trees on top of the moraine. Perhaps because of our fatigue, we camped a little too close to the stream and were attacked by mosquitoes who seemed to find Douglas particularly tasty.

The next morning was clear and beautiful, and the views were magnificent as we climbed through increasingly rugged terrain toward the 12,050ft Shepherd Pass. The last part of the climb switchbacked up a quite dramatic chimney and traversed a small snow field before we finally reached the top of the pass. The view of the High Sierra that opens up as one achieves this summit is awe-inspiring. The mass of 14,018ft Mount Tyndall lies to the south, most appropriate for this location since it is named after the English scientist who first explained why the sky is blue. The northern skyline consists of the angular outline of Diamond Mesa which, for the moment, obscures the view of Caltech Peak. Below one's feet to the west are gently sloping meadows where Tyndall Creek begins and, in the distance, a marvelous panorama of Sierra peaks. Shepherd Pass also marked our entrance into Sequoia National Park and, because of this, several posted signs greeted us at the summit. One, in particular, I found puzzling. It read "No loose herding beyond this point". "Loose herding" being undefined I was not at all sure how I could avoid an inadvertent transgression!

It is an easy walk down the gently sloping trail toward Tyndall Creek. About the 11,400ft level, we left the Shepherd Pass trail and cut across country to meet the John Muir trail at a point some distance north of the junction of the two



Left: Climbing toward Shepherd Pass. Right: Shepherd Pass.



Left: View west from Caltech Peak. Right: On Caltech Peak.



Left: Mt. Whitney from Timberline Lake. Right: Doug on top of Mt. Whitney.

trails. During this cross-country leg, we rounded the south end of Diamond Mesa and mountains that lay to the west were gradually revealed. First the ridge that projects south from Caltech Peak and then the Peak itself became visible. We lunched beside the Muir trail and selected the equipment that we felt we needed for the climb to the Peak. Then we stowed our packs behind some rocks, and set off north along the Muir trail. Since there is no trail to the summit of Caltech Peak, we were guided by several prominent landmarks. The

first of these is the saddle on the ridge just south of the Peak. Also important to identify are the two small lakes in the valley below and east of the saddle. One is about 200ft higher in elevation and a few hundred yards north of the other, the former being slightly north of the saddle and the latter being slightly to the south. These landmarks allow you to identify the only safe route to the top of the Peak when approaching from the east. One way to find these lakes when traveling north on the John Muir trail is to notice a fairly prominent waterfall on the left about 100yards from the trail. Leaving the trail at a point where the elevation is about 12,000ft and climbing the slope to the south of the waterfall brings you to a point midway between the two lakes. From here you should climb straight up the fairly steep and rocky slope toward the top of the ridge, traveling due west. When most of the way to the top of the ridge (and south of the saddle), you can begin to veer north toward the summit. The easiest route is probably to stay to the east of the ridge until past the saddle and then to proceed northwards up a moderate slope to the summit. I should also point out that there is another but somewhat harder route that can be used when the Peak is approached from the west, beginning at Lake South America. Lest I have made the climb seem too difficult, let me hasten to say that as a late comer to backpacking at nearly 50 years of age, I had little difficulty with the eastern route that required no real climbing but a good deal of scrambling over rocks. Perhaps the only mistake Doug and I made was in not carefully marking our route on the way up. We had some difficulty retracing our steps on the descent; care needs to be taken in order to avoid difficulties at the lower altitudes where the slopes are very steep.

The climb up from the John Muir trail can be accomplished fairly easily in about two hours, and the reward is a truly magnificent view in all directions. To me it was substantially more interesting than the view we had two days later from the top of Mount Whitney. Looking north along a precipitous and narrow ridge one sees Mount Stanford (inappropriately about 150ft higher than Caltech Peak). To either side of this ridge, the dropoff is almost vertically down more than a thousand feet. To the northeast, massive cliffs stretch from Mt. Stanford to Junction Peak; the John Muir trail makes its way over this obstacle via the dramatic Forester Pass. To the east, the rectangular mass of Diamond Mesa encloses the lake land below where we began the last part of our climb. Off to the southeast, the view consists of a whole range of 14,000ft peaks including Mount Tyndall, Mount Williamson and, about 15 miles distant, Mount Whitney. Another range of spectacular mountains, the Kaweah Peaks Ridge, frames our view to the southwest with a whole maze of valleys and lakes lying between us and that range. Almost directly below one can recognize Lake South America by its shape. Finally to the west and northwest another range of mountains including Milestone Mountain, Thunder Mountain and Mount Ericsson define the valley beneath us and, as on the east, close in so that passage northwards out of this valley requires negotiation of the precipitous Harrison Pass. It felt as though I had climbed all the way to the sky.

After admiring the view for many, many minutes we began examining the small but interesting cache in the cairn at the summit. This consisted of two

metal boxes. One was the conventional Sierra Club model, containing a copy of the brochure “Facts about Caltech” (left, I believe, by Bill Schaefer about 1978) and a handsome log book containing the musings of those who had climbed the Peak in the preceding 30 or so years. Doug and I left our own records in this journal. Later we regretted not taking the time to make a list of all of those whose names appeared in this book. But I remember seeing Don Caldwell, the Director of Choral Music, and the names of a number of students and former students, for example Kirk Hazelton. I would estimate that perhaps 40 people had left a record of their ascent in this journal. The other container was clearly a labor of love. Made of aluminum, it had the name Caltech cast into the lid and contained another journal for which the box was custom-made. To this collection of artifacts we added the contribution that we had carried all the way from Pasadena, namely a stainless steel plaque measuring about 15in by 10in with the Caltech Centennial emblem engraved on it along with the following message:

Caltech Peak (13,832 ft.).

*Placed on this summit in celebration
of the 100th birthday of the California
Institute of Technology and with affection
for all of the students of the Institute.*

July 1991

Chris Brennen, Dean of Students.

Douglas Hart, Graduate Student.

This plaque had been made for us in the Mechanical Engineering Shop by Marty Gould and undergraduate Karen Hong. We affixed it to the rocks on the summit by means of two stainless steel cables using Vise Grips borrowed from Marty.

Finally, since the afternoon was coming rapidly to an end, we reluctantly began our descent. Upon reaching the John Muir trail, we collected our packs and hiked southwards, entering woods at the point where a number of trails converge near the Tyndall Creek camping area. Staying on the Muir trail, we crossed Tyndall Creek and made camp for the night a short distance south of that crossing where there is a row of small lakes just east of the trail. Fortunately, we chose a site further from the water so that the mosquitoes were far fewer in number though not completely absent. I slept soundly after the efforts of the day and awoke refreshed to another glorious morning. After breakfast, we set off southwards along the Muir trail traveling through beautiful, mostly wooded country highlighted by many magnificent views of the surrounding mountains. As we climbed gently toward Bighorn Plateau we looked back for a great view of Caltech Peak from perhaps its best vantage point. For the next seven or eight miles we did not gain or lose much altitude but dropped down into and climbed back out of several most attractive valleys with moderate streams. Here we met and chatted with Len, a schoolteacher from New Jersey who had spent about ten

days in the Sierras without any prior experience of backpacking “just to see if he could survive”. He claimed to have started with far too much gear and food, most of which he had thrown away at the end of the first day. This included his brand new boots! He had been surviving on oatmeal and peanuts ever since. He was a lively and interesting man with whom we had more conversations while camping that night at Guitar Lake.

At Crabtree Meadow, the Muir trail turns eastward and begins to ascend the valley of Whitney Creek. We had a very pleasant lunch of black bean soup at a pretty spot beside this creek, and even took time out for a siesta. Refreshed, we continued on up this attractive valley until we reached the picture-book Timberline Lake. Since we were well ahead of schedule, we stopped for about two hours at this beautiful lake. I rested while Douglas tried his hand at fishing. Though he caught several fish, none were large enough to keep for dinner. I spent time studying the massive bulk of Mount Whitney, looming above us, and the almost sheer cliff that extended south from Whitney and which the map said the trail climbed. I could not make out any trail, and still less could I visualize the possibility of any trail surmounting that impressive barrier. Late that afternoon we reluctantly left Timberline Lake behind us, and climbed out of the trees and up to the larger Guitar Lake immediately below the mass of Mount Whitney. Along with a number of others (including Len) we made camp for the night near the shores of Guitar Lake at an altitude of about 11,450ft.

Anticipating a long day we arose early, breakfasted and started out shortly after sunrise. The trail led through steeper and steeper rock-strewn terrain as it approached the almost vertical wall of rock above us. We then began a series of switchbacks that, despite my disbelief of the previous day, did climb the necessary 2000ft to the top of the rock wall. There, at an altitude of 13,500ft, our trail met the trail that ascends Mount Whitney from Whitney Portal. Leaving our packs at this junction, known as Trail Crest, we set out to climb the remaining 1000ft to the summit of Mount Whitney. Unlike the rest of our trip, we now seemed surrounded by hikers virtually all of whom were making the pilgrimage from Whitney Portal to the highest point in the contiguous United States. Many had climbed to this altitude too quickly, and were either in considerable discomfort, or had decided to try and sleep it off among the rocks beside the trail. Most were clearly laboring compared with Douglas and I who had the advantage of several days of acclimatization.

The trail from Trail Crest to the 14,496ft summit of Mount Whitney proceeds along a ridge, the route having been cut into the cliffs on the western side of the ridge. This part of the trail is quite spectacular. At intervals there are breaks in the ridge that form windows through to the other, eastern side and provide dramatically framed views of Owens Valley some 10,000ft below. The last leg of the climb through a field of rocks seems endless until, suddenly, one surmounts the last rise and there is the summit and the low stone warming-hut built as a refuge against the violent storms that can occur almost without warning on these mountains. Douglas had gone on ahead on this last leg and I was somewhat glad of that for I was quite unable to contain my emotions over that final fifty yards with the summit in full view. Nearly two years before,

at a time when I could barely walk I had dreamed of the possibility of being able to climb this mountain. I don't think I ever really believed that it was a physically viable objective. Since that day two years before, I had trained hard and slowly, often disappointingly slowly, I had recovered some semblance of health and begun to establish some reserves of strength. I have never thought of myself as particularly strong, and I had often doubted my ability to endure. I confess that, over those last few yards, tears of pride and accomplishment streamed uncontrollably down my face. It was a feeling I will never forget.

The view east from Mount Whitney is unforgettable. The immensity of the cliffs and the magnitude of the height are overwhelming. It was almost more than the mind could take in. The view from Caltech Peak had seemed kinder perhaps because of its variety. This was enormous and brutal. We took some photographs and signed the register in the shelter of the warming-hut. Then, subdued, we began our descent and collected our packs at Trail Crest. There followed a series of 97 switchbacks down the most immense talus slope. Some distance below that we had a pleasant lunch beside the stream just above Mirror Lake. The last few miles to Whitney Portal seemed endless and our feet were quite sore when we finally arrived at Douglas's car. Driving down toward Lone Pine we found a campground where we enjoyed a wash and a shave in the stream before pressing on to the Symmes Creek trailhead to collect my car. Then back again to Lone Pine where we treated ourselves to a meal in a cafe before the long drive back to Pasadena.

Thus ended a trip whose images and feelings will linger with me forever. They are a kaleidoscope of beautiful scenes from the pages of National Geographic merged with vivid personal emotions of exalted triumph and human frailty. Though I was to climb many peaks in distant corners of the earth in the years that followed, Caltech Peak and Mount Whitney represent a defining moment in my life and thus retain a special place in my affections and my chronicles.

Chapter 4

CANYONEERING IN THE SAN GABRIELS

“This range is more rigidly inaccessible in the ordinary meaning of the word than any other that I ever attempted to penetrate. The slopes are exceptionally steep and insecure to the foot, and they are covered with thorny bushes from five to ten feet high.”

From “The Mountains of California” by John Muir, referring to the San Gabriel Mountains.

Growing up in Ireland where all the mountains have been ground down by eons of ice sheets, I was fascinated by the precipitous San Gabriel Mountains from the first moment I laid eyes on them. That was more than 40 years ago when I first drove up the Pasadena Freeway to spend what turned out to be most of my life in the shadow of this vertical wonderland. The San Gabriels were to become one of the joys of my life, an infinite resource for adventure and for serenity. In the 1970s, with young children in tow, one of our favorite weekend pastimes was to hike as far as we could up the steep canyons of the front range that lay just a stones throw from our home. Eaton, Rubio and Bailey were great favorites especially since they all involved some adventurous climbing. In Rubio we would ascent the now buried Maidenhair Falls using an old wire cable that hung on the right side in order to get to the spectacular twin falls, Moss Grotto and Ribbon Rock. In those days there was a lovely little deep pool on the narrow shelf between the two falls and we would climb up there to go swimming. Not knowing any better, I used an old piece of hardware rope tied around their chests to belay my young daughters. The younger one still tells gleeful stories about dangling in the air after a slip. One of my favorite photographs is that of my elder daughter sitting by that pool. Bailey Canyon was similar with a series of adventurous climbs needed to ascend beyond the

first waterfall. But, perhaps, the greatest adventure was in Eaton Canyon and would be unrecognizable to most modern hikers. In those days at a point on the east wall of the canyon about 100 yards downstream of Eaton Falls there was a series of rickety wooden stairs interspersed with precipitous ledge trails that climbed about 200ft up the canyon wall. We would carefully ascend these ledges and stairs to a place where there was a tunnel through the mountain ridge that carried a water pipeline. Taking a deep breath we would walk through this dark and narrow tunnel only to emerge into what we thought was another, secret canyon. We would delight in the pools and falls in this special place. Later explorations would reveal that this was in fact another, upper section of the same canyon. But back then we thought this the height of adventure and loved the mystery of the place. Some years later, for appropriate safety reasons, the Forest Service tore down the old stairs and blocked the tunnel. But by that time my children had grown.

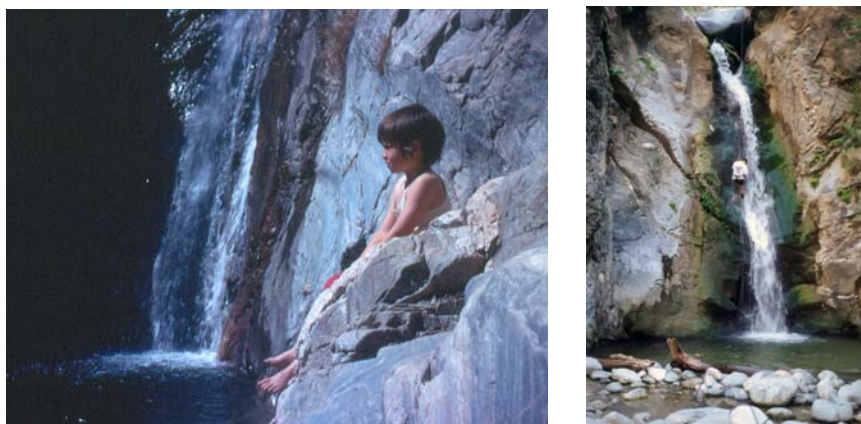
That is where it all started. In the increasing time I had alone I hiked almost all of the 100 trails in John Robinson's classic guide, "Trails of the Angeles" and, sometime in the late 1970s, early 1980s, I began to wonder what lay beyond the ends of the established trails, especially in the Devil's Canyon and Sheep Mountain Wilderness Areas. I was particular drawn to the waterfalls and to the canyons they lay in. It seemed to me they were among the most spectacular features of the San Gabriels and I wondered why they were not better appreciated and documented.

Geologically the San Gabriels are among the youngest mountains in North America. The kink in the San Andreas fault as it runs through the Los Angeles area has caused our mountains to be thrust up as the Pacific tectonic plate moves north relative to the North American plate (the San Andreas Fault runs along the northern foothills of the range and is, of course, the consequence of the movement of those great tectonic plates). The erosion and growth that smooth out other ranges have not yet had time to counter this growth and hence the rugged verticality of the San Gabriel Mountains. After several attempted ascents in the area of Eaton Canyon, John Muir wrote as follows in his "Mountains of California":

"This range is more rigidly inaccessible in the ordinary meaning of the word than any other that I ever attempted to penetrate. The slopes are exceptionally steep and insecure to the foot, and they are covered with thorny bushes from five to ten feet high."

Indeed, there may be canyons, perhaps in the Devil's Canyon Wilderness Area, where man has rarely, if ever, set foot.

The next phase of my explorations involved a new mountain bike that allowed me to go further along the established trails than my feet would carry me. It was inevitable, however, that I would push too far into the wilderness and the notorious result was an unplanned overnight spent beside the East Fork of the San Gabriel River, a consequence of assuming the red line on one of John Robinson's maps meant there was a trail all the way down that canyon. So I set the bike aside and returned to exploration on foot, venturing as far as I could both up canyons from the bottom and down canyons from the top.



Left: Daughter Dana in Rubio Canyon. Right: Rappeling in Eaton Canyon.

Often I was stopped by waterfalls that I did not have the skill to ascend or descend. One particular objective became an obsession and motivated my first true canyoneering adventure in the San Gabriels. Devil's Canyon begins high on the slopes of Mount Waterman and winds its way all through the Devil's Canyon Wilderness before emptying into the Cogswell Reservoir. Eventually I would traverse the entire length of this wilderness canyon. But in those early days I had only explored a short distance downstream from the end of the trail that drops down into the canyon from Chilao Flats. I had managed to reach the Devil's Canyon Falls that could be so awesome after winter rains but only after an exhausting all day walk there and back that left little time for exploration. A subsequent examination of the topo map revealed that it might be possible to reach the falls much more readily (and thus leave time to explore them) by descending a steep side canyon that dropped down from the Angeles Crest Highway at a place called Windy Gap. Several times I climbed down this steep gully only to be stopped by a dryfall that I could not descend. Moreover, I began to recognize that all this climbing alone was both irresponsible and dangerous.

Now it so happened that about this time I had a succession of graduate students who were hikers and a few who had some rock climbing experience. I persuaded several of them to accompany me on another effort to descend this side canyon (Skull Canyon) that we soon did successfully. Some of those young people never went hiking with me again. One, however, caught the fever and he happened to have some rock climbing experience. His name was Garrett Reisman and he not only became a very good friend but one of the pioneers of canyoneering in the San Gabriels. Later, he went on to even greater adventures as a NASA astronaut. To complete the story, it turned out we were able to find a safe way down that side canyon without using ropes. However, we were already discussing the need for technical equipment in our anticipated explorations of other canyons.

Several weeks later we assembled the necessary harnesses and ropes and set

off for a more ambitious descent in Bear Canyon, the other major drainage in the Devil's Canyon Wilderness. There were about seven of us and only Garrett had ever rappeled before. He claimed it was easy and he would teach us "on the job" as it were. Incidentally, in that group was another future astronaut, Bob Behnken, and Bob, I remember, came dressed in what he considered appropriate attire for this adventure, full army fatigues and big, black army boots. When I think back that somehow epitomizes how naive we all were - and we didn't have a single helmet in the whole group! Anyway we dropped down into Bear Creek from the end of the highway at Crystal Lake and got quite far before we encountered the first necessary rappel, a drop that would be trivial for us today. It consisted of a vertical 12ft drop into a deep pool. There was a very convenient tree about 10ft back from a sharp lip at the top of the drop. Garrett took over. After much talk he rigged the rope around the base of the tree and asked for the first volunteer. Bob stepped forward in his natty fatigues. Garrett instructed him at length and then Bob started backwards toward the lip and very slowly began to rotate backwards with his feet on the edge. Unfortunately Garrett had rigged the rope so low on the tree that this rappel entry was much more difficult than it should have been. Bob got about two thirds the way into his rotation before the inevitable happened. He lost his balance, swiveled sideways and ended upside down just over the lip with the black army boots sticking straight up. Fortunately he did not let go of the rope and we were able to rescue him before any harm was done. After that ignominious beginning things could only get better and we began to learn the art of rappeling by trial and error, by devising our own anchor methods and other rope techniques. But the reader might be amused to know that Garrett and Bob flew into space together in the Space Shuttle Endeavor in December 2007. Bob made two space walks, the first on the end of a robotic arm controlled by Garrett. I wonder if he recalled what happened that day in Bear Creek!

In the years that followed we became more and more ambitious in tackling canyons that presented more serious obstacles. Eaton Canyon was one that held an increasing fascination for us. We had hiked up to Idlehour Campground and explored down as far as a place we came to know as the "Point of No Return", where a small slide down into a deep swimming pool meant that return upstream would be exceedingly difficult without a rope. We had also conducted several expeditions in which we tried to get as far up Eaton Canyon from the bottom as we could. In these efforts we bypassed the big falls at the bottom by climbing over the ridge above where the wooden stairways had been. Upstream was a deceptively easy looking obstacle that we came to call "Naked Triumph Falls" after one of our party led the way by swimming the pool naked before climbing the small falls. But we never were able to get further upstream than the 12ft falls that everyone now jumps during a descent. Moreover, the topo map showed there could be many difficult obstacles between the "Point of No Return" and this 12ft falls. We were determined to attempt a descent but could find no information anywhere that might guide us. Finally Garrett and I decided we would do it alone and without beta. I don't think I will ever forget arriving at the top of the falls we now call "The Gully" and looking down at the pool

at the bottom that seemed hundreds of feet away. But it was only about 60ft and we made it down though the descent was exciting. The river was flowing lustily that day so we ended the descent behind the falls and had to do our first swimming disconnect.

In the 1990s others began to join our adventures. When Garrett moved on to high adventure with NASA, two other graduate students became key pioneers in the group, Clancy Rowley and Mark Duttweiler. We also made a valuable connection one day while buying a large quantity of webbing in the Sports Chalet mountain shop in La Canada. The grey-haired man serving us asked what we were going to do with so much webbing. We described our adventures and his interest was aroused. His name was Alex Kirkcaldy and he had once been head of the Montrose Search and Rescue Team. Moreover, during his time the Team had conducted a number of rescues from canyons in the Big Tujunga area, extractions of people who had become stranded at the top of waterfalls they could not descend. Alex proceeded to tell us of Fox Canyon, of Silver Canyon and of Suicide Canyon, all of which empty into the Big Tujunga and all of which contain big drops. He even mentioned a young man who worked at JPL and whom he had rescued from Fox Canyon; his name was Martin Regehr and more of Martin shortly. We took careful note of Alex's comments and resolved to get to all of the canyons he mentioned. It was great to finally get some real beta.

The following winter we conducted a bike ride down the fire road from Mount Gleason to the Big Tujunga. At one point near the bottom of that ride we were able to view one of the waterfalls in Fox Canyon from about half a mile away. It was an awesome, roaring sight and one that persuaded us to wait until summer before venturing into that maelstrom. In the intervening months we conducted several exploratory hikes during which we developed a rough trail down into Fox Canyon below the Gorge starting from the fire road on the ridge to the west. We also descended the Lower Fox Canyon Falls and even conducted a reconnaissance of the gorge from the air (Garrett was also a pilot). As the day of our planned first descent approached we again consulted Alex to glean every last bit of beta from him. During that conversation he introduced us to a young man working temporarily in the mountain shop, a climber by the name of Troy Sette. Alex persuaded us to allow Troy to accompany us and hence another of the pioneers joined the group. In the end the descent of the gorge we named the "Great Falls of the Fox" was a truly spectacular adventure and one we repeated many times. It is amazing to think that this jewel of the San Gabriels is not even marked on the topo map.

A short postscript before leaving the Great Falls. We later made Martin Regehr's acquaintance and he accompanied us on one of our trips down Fox Canyon, making his first "successful" descent. Susan Sette, Troy's wife, was also with us on that trip; we only discovered a week later that she was three months pregnant that day.

About that time in the early 1990s we first learned of the term "canyoneering" (up to then we just called what we did "adventure hiking") and we discovered Tom Jones' marvelous guide to Zion National Park and other Utah

destinations. It did not take us long to organize the first of many trips to Zion and later to the other great destinations on the Colorado Plateau. Several years later, three other great friends joined the core of the canyoneers who developed the San Gabriels, Death Valley and other southwestern adventures: the Marquesa de Canyonette, Randi Poer, whose blithe spirit enriched any adventure, Scott (Seldom Seen) Smith, one of the kindest people I have known, and the “Magnificent Marine” John Perry whose strength eased all obstacles. There were others, of course, and among them my great friend David Wales, but I have mentioned all those who made major contributions in the early days of canyoneering in the San Gabriels. And who were truly a joy to be with.

Chapter 5

SORAKSAN

*“Old men ought to be explorers
Here and there does not matter
We must be still and still moving
Into another intensity.”*

From “East Coker” by T.S. Eliot (1943).

In the summer of 1992, I was scheduled to attend two conferences in the far east, one in Seoul, Korea, and one the following week in Hangzhou, China. This meant that, along with one of my former students, Steven Ceccio, and other participants, we had an intervening weekend to indulge in whatever activity we wished. Steven and others had elected to spend that time in Hong Kong since that city was a necessary transit point on the way to Hangzhou. They also seemed to be attracted by the shopping opportunities that Hong Kong provided, a feature that had no appeal whatsoever to me. Nevertheless, since I thought it might be interesting to see the Crown Colony, my initial flight plan was the same as that of my colleagues.

I think that it was during the long flight from Los Angeles to Seoul that I began reading a guide book for Korea, and started to take notice of the photographs of the rugged and beautiful mountains of Mount Soraksan National Park. Several times I returned to those pictures, and a possible alternative weekend plan began to form in my mind. One of the problems, however, was how to get there. Mount Soraksan is in the far northeast corner of South Korea, above the famous 38th parallel, and not far from the DMZ (de-militarized zone) that separates South Korea from North Korea. It therefore lies on the opposite side of the peninsula from Seoul and, although only about 150 miles(?) as the crow flies, the journey is a tortuous one because of the mountainous terrain and the deliberate lack of railways so close to North Korea. To reach the Park, it would be necessary to travel to Sokch'o, a fishing center on the eastern coast. This could be reached either by a 40 minute flight or by a 5.5 hour express bus

ride from Seoul. During the first couple of days of the conference in Seoul, my plan began to take concrete shape. If I could catch the flight from Seoul to Sokch'o on Friday afternoon, I could then spend Saturday hiking and catch a return flight to Seoul on Sunday morning in time to connect with a flight to Hong Kong. I finalized this rather tightly scheduled itinerary on Tuesday and looked forward with anticipation to my adventure in Korea. Only one prerequisite remained. With the help of one of the student aides at the conference, I located a map shop in Seoul where I purchased a hiking map of Mount Soraksan that had some English subtitles.

In the early afternoon of Friday, August 28, 1992, I took the free airport shuttle bus from Hotel Lotte in downtown Seoul to Kimpo International Airport, leaving adequate time to navigate the domestic terminal and catch the late afternoon Korean Air flight to Sokch'o. As I waited for the beginning of check-in to be announced, a message flashed on the screen: the flight to Sokch'o had been cancelled due to weather conditions at that airport. Unlike other parts of the world, in Asia that seems to be the end of the story; you then queue for a refund and are on your own in so far as alternate travel plans are concerned. I sat there bewildered, trying to figure out what to do next. I could return to my original travel plan and give up my visit to Soraksan. Or I could try to find my way to Sokch'o by express bus. The cosmopolitan nature of air travel means that, in airports, one can be fairly confident of finding someone who speaks English should difficulties arise. Bus travel is, however, a completely different story, and so I was somewhat apprehensive about setting off in a bus for a fairly remote corner of Korea. But my sense of adventure got the better of me, and I soon found myself on a crowded city bus bound for the Seoul express bus terminal. Thanks to a kind lady on the city bus to whom I communicated my destination by means of bus sounds, I alighted at the correct stop next to the large and scattered complex known as the Seoul Express Bus Terminal. Fortunately, each major destination had its own ticket booth and, after some searching, I finally located the Sokch'o booth, identifiable because I had memorized the Korean symbols for that city. The 5.00pm bus was fully booked, but I was able to purchase a ticket for the 5.30pm bus. The bus itself was clean and comfortable. Initially I failed to realize that I had purchased a ticket for a specific seat, and so had to be asked to move from my first stop near the front of the bus. However, my spirits were quickly revived when a beautiful young Korean woman in a red suit took the seat beside me. I guess she had no choice. I had the impression that she was a little taken aback by the strange foreigner in the seat beside the one allocated to her.

The bus set out on time for the five hour journey and initially traveled quickly on a brand new freeway. However, after an hour or so we turned onto a narrower, two-lane road called (somewhat inappropriately) the Yong Dong expressway. This wound its way through the mountains that occupy most of the western part of the Korean peninsula. We passed through very pleasant countryside, valleys filled with farms and separated by ridges of mountains. The land was green, the valleys fertile and the mountains covered in trees. Traffic was heavy on the Yong Dong Expressway and so our progress was slow in places

but otherwise the bus traveled quite quickly. At one point the young woman beside me seemed to summon the courage to offer me a can of fruit juice she was carrying. I declined but worried that I might thus have offended her.

Daylight was dwindling as we passed the city of Wonju and the peaks of Ch'iaksan National Park off to the south. With the advent of sunset the young woman and I embarked on our first conversation. Though her English was very limited, we made some progress thanks, in part, to the phrase book chapter in my guide book. Apparently, she worked in Seoul and was returning to her family in Sokch'o for the weekend. Like me, she had been booked on Korean Air and had to make alternate plans when that flight had been cancelled. The bus then arrived at a way station called Hoenggye in the mountains just south of Odae-san National Park. Here restrooms and food-stands were set up to serve the needs of bus passengers. I tried to find something to eat that I both recognized and could consider reasonably safe. I did not do very well. The young woman in red realized this and bought some delicious fried corn that she shared with me when we reboarded the bus. As we resumed our journey through the night, the weather worsened and it began to rain heavily. Worse still for the prospects of my hike the next day, the mist reduced visibility to about 20 yards. In these miserable conditions, the bus followed a long and winding road that descended from the mountains to the eastern coastal plain. We passed close to Kangnung and then turned north, following the coast toward Sokch'o. The bus stopped again at a rest stop where the 38th parallel meets the eastern shore. In Korea this latitude has considerable historical significance. Following the Second World War, Russia, Britain and the United States struck a deal in which Russia was to occupy the peninsula north of the 38th parallel and the United States the land south of that line. The dispute over this boundary eventually flared into the Korean War in which one side and then the other pushed deep into the other's territory. When the final armistice was signed, it established the current border and the broad Demilitarized Zone (DMZ) not far from the 38th parallel. On the east coast the border and the DMZ are some miles north of the 38th and hence the location of the bus stop has real significance for the Korean people. A large monument marked the exact location of the 38th parallel.

My new guide helped me again, this time to get some very welcome hot coffee and we then set off on the final leg of our journey as heavy rain continued to fall. The bus passed through the coastal village of Yangyang and, a few miles further, the woman in red pointed out the junction where the road to Mount Soraksan National Park joined the coastal highway. By then we had reached the outskirts of Sokch'o and very shortly thereafter stopped at the rudimentary Sokch'o bus stop consisting of a small, and almost unlit, shelter. Without the help of my new found friend I would have been left standing in the dark and the rain without much idea what to do next. There were taxis that pulled up and embarked bus passengers but none seemed to have any interest in a stranger. However, my friend buttonholed one cabbie who was headed for Sorak and persuaded him to add me as a passenger. And so I hurriedly put my luggage in his trunk and squashed into the front seat. In the rain I had only a moment to thank the woman in red and to say goodbye. I tried to give her my umbrella for

she had none and the rain was still pouring down; but I could not make myself understood and she would not take it. Time was too short even to understand what she said when she told me her name. As the taxi raced away in the rain I was saddened that I would never be able to write to her to thank her for her kindness to a stranger. I also reflected on how often, in the furthestmost corners of the earth, I had met kind and gentle people who had given me help when I needed it.

The cabbie had been directed to take me to Hotel New Sorak where I had a reservation and it was not long before I was checking in. The hotel, which was relatively modern and clearly designed for westerners, seemed almost deserted. Though the guidebook said they spoke English, I had great difficulty making myself understood. Nevertheless I was soon settled in a pleasant room and began organizing my hiking gear for an early start in the morning. As well as my boots, clothes, rain gear and emergency kit, I had brought my small back pack with me in anticipation of a hike such as this. In Seoul I had purchased some provisions such as bananas, crackers, canned fruit and orange juice. So I went to sleep hoping that the weather in the morning would be substantially improved.

I woke with the dawn, and was delighted to find that the rain had stopped and that the mist had cleared. From my window I could see that the hotel was in a broad canyon in the foothills of the mountains. Below me a fast and full river carried the substantial run-off of the last few days to the sea a few miles to the east. The rugged and steep, tree-covered mountains rose dramatically to the west though the higher elevations were still hidden in the clouds. My excitement grew as I anticipated some marvelous hiking and very soon I was walking up the road toward the entrance to the National Park about a half mile away. Here a substantial complex of souvenir stands and snack shops had been built to cater for the bus loads of tourists (mostly Korean school children) who visit the Park every day during the season. But as I walked through at 6.00am, the place was deserted. I intended to follow the trail toward the highest point in the Park that is sometimes known as Mount Sorak or Soraksan but whose proper name is Taech'ongbong Peak. I was not at all sure that I could reach that destination in the time available that day. The summit was about 6 miles away at an altitude of 5607ft and my hiking map suggested that it would take 6 hours and 20 minutes to get there. I would have to travel significantly faster in order to make it there and back during daylight.

The trail is initially broad and easy as it follows the main river valley past a series of snack bars and souvenir stands located at regular intervals along the part visited by the average tourist. It is a delightful valley with abundant mixed forest, waterfalls and pools. The weather was clearing rapidly and allowed me a view of the rugged mountain pinnacles for which this area is so well known. The sun even broke through and made the walking even more delightful. Soon the trail steepened, the canyon closed in and the scenery became more and more spectacular. The Park Service had installed metal bridges and staircases to allow one to cross the river or negotiate particular places that would otherwise have needed climbing gear. These bridges and staircases occurred with increasing

frequency as I progressed upstream. The trail itself also became noticeably rougher. In a dry climate like California's, the trails often get ground down to a fairly flat surface; on the other hand the rainfall in this part of the world washes away the finer material leaving a rough, rocky surface that is considerably harder to walk on. Soon I left the tourist area behind and entered the backcountry that only experienced hikers penetrated. I met several groups of hikers who were obviously returning having spent several nights in the wilderness. Here I began to encounter a curious phenomenon. The Koreans are very keen on hiking but the interest is primarily confined to the younger members of the educated class. Most of them have studied English extensively and are usually very keen to take any opportunity to practice conversation with a native English speaker. The further up the mountain I progressed, the more likely it was that anyone I met would fit into this category. Consequently, the further I penetrated the wilderness the more likely it was that anyone I met spoke English. Somehow that seemed very strange to me.

At just about the time I began to feel hungry, I reached a particularly beautiful set of waterfalls and pools and so I sat down to consume my mid-morning meal of bananas, crackers and canned fruit washed down with orange juice. Though odd, the meal was just what I needed for it contained lots of sugar. Soon after lunch, I encountered a young German couple who were descending and stopped to chat. They had clearly become somewhat dispirited by the downpour of the previous day during which they had tried to reach the peak. The rain and the mud had made for very hard going; they had given up the attempt and suggested that I would find it equally impossible. That was momentarily discouraging for I thought I had been making good progress up to that point.

A few yards later I came upon the first back country rest stop called Yangp'ok Shelter. Initially, I was not sure what to make of this shelter. It consisted of a small wooden shack with an awning and some benches arrayed in front of it. The front of the shack was constructed like a street vending stall and a limited range of goods were displayed for sale. There seemed to be hard-boiled eggs, candy bars and an assortment of canned drinks. Some of these were recognizable, for example the ubiquitous soft drink cans, Coca Cola, 7 Up, etc. Other products one could guess at by the pictures on the label, for example some of the orange juice cans. But other goods were labeled only with indecipherable Korean letters. All of these goods must be hauled in on the backs of the people who operate the rest stops and tend the vending booths. They seemed friendly though clearly unused to foreigners. The prices were a little high and, I would find out, rose as one ascended the mountain. But that seemed only fair. I purchased some orange juice and candy and also a can of Pocari that I had read somewhere was the Korean equivalent of Gatorade, though the name Pocari apparently means something like pig sweat. At any rate, it tasted very like Gatorade and I was glad to have identified it. Sitting down to enjoy my Yangp'ok snack, the other features of the rest stop came to my attention. A short distance away was a rudimentary two story brick building with openings rather than doors and windows. A number of young Korean hikers were seated



Left and Middle: Views from the trail. Right: Metal Staircase.



Left: Huiun-gak shelter. Right: On Taech'ongbong Peak.

in the openings packing their gear and lacing up their boots. I recognized that establishment as one of the hostels I had read about where one could spend the night under a roof for a very modest fee. I wondered, idly, what the place smelt like. But I quickly reprimanded myself for such a culturally-biased thought; chances are it was quite clean though I never checked. Finally I also recognized that the *raison d'être* for this rest stop was the presence of a nearby shrine that I did not visit.

Just beyond Yangp'ok Shelter the trail entered a truly precipitous canyon where passage was only possible because of the metal gangways and staircases. In several places these hung precariously from the sides of cliffs several hundred feet above the river. Progress required a good deal of effort to suppress my fear of heights. At the same time the canyon was fantastic, particularly the spectacular Ch'ondang Falls that came into view as the canyon made a left hand turn. Eventually, I came to a point where the canyon leveled out and the metal walkway ended; here the trail left the river to climb a steep and fairly

high slope to the ridge above. This climb was quite hard for the temperature had risen and it had become quite humid.

After many switchbacks, I finally reached the ridge and shortly thereafter the second rest stop known as Huiun-gak, equipped with vending shack and overnight shelter. Here, again, I purchased Pocari and sat down on one of the benches to enjoy a rest. A number of other young Korean hikers were similarly resting and struck up a conversation with me. They seemed genuinely impressed that an old (and presumably dissipated) Westerner could make it that far in one day and somewhat dubious about my prospects of making it to the top. The man tending the booth also joined in and, through translation by one of the young hikers, pointed out the best way to the summit. Patchy clouds were beginning to roll in as I started up the steep trail that followed a ridge to the summit. Though there were many places where I had to find toe and hand holds to ascend the ridge, the trail was well traveled and the climb was not too difficult so I made steady progress over the last 2000ft. The view at many points was quite spectacular, and made other-worldly by the patchy clouds below me. In several places I could look down over 2000ft to the valley through which I had come. Moreover, one could look north over the DMZ into North Korea though there were no visible signs of that demarcation line. Close to the summit, the clouds closed in completely so it was something of a surprise when the trail emerged onto a broad ridge leading to the peak about a hundred yards away. The cairn at the summit was decorated with several inscribed monuments, including one large one with the Korean characters corresponding to Taech'ongbong, the official name of the peak. Even up here there was a rest stop though it was discreetly placed about a hundred feet down the windswept slope from the summit. Again I bought a can of Pocari; at this elevation it cost about a dollar for a small can. There were some other low huts beside the vending booth but I could not discern whether they included an overnight shelter. I rested for a while and listened to the wind.

I could have tried to descend by a different route but eventually decided to take the safest course and retrace my steps. The descent was tiring and, because of the roughness of the trail, hard on the ankles and knees. By the time I approached the bottom, I was quite exhausted and stopped at several of the tourist shops for orange juice or Pocari. Unlike my passage in the early morning, this time the bottom was filled with crowds of school children. My fatigue made me impatient when they got in my way. They looked at this strange Westerner with puzzlement and I could not help but wonder what they thought. I stopped in one of the tourist shops for some supplies and then, exhausted but exhilarated by a marvelous day of hiking, returned to the hotel and a most welcome rest. After much difficulty, I was able to obtain a tuna fish sandwich from room service and prepared for an early start in the morning.

The morning brought rain and low clouds, and I felt very fortunate to have had such pleasant weather the previous day. I had arranged for a taxi to take me to Sokch'o airport for the early morning Korean Air flight to Seoul. There I would connect with my Korean Air flight to Hong Kong. However, when we arrived at Sokch'o airport, I discovered that my flight was cancelled, again

because of the weather conditions. Others arriving to catch the same flight departed resignedly as though this were a not unexpected occurrence. I protested that I would not be able to catch my flight to Hong Kong. The ticketing agent then engaged my taxi driver in animated discussion, the outcome of which was a plan to get me to Seoul in time to catch the flight to Hong Kong. The taxi driver would drive me to the airport in Kangnung (about 50 milesa down the coast) in time to catch a flight from Kangnung to Seoul. So we set off at break-neck speed along the narrow two-lane coastal highway. The driver seemed to revel in the challenge. Many times I closed my eyes and prayed. In the end we made it to Kangnung airport with time to spare and the flight to Seoul allowed me to catch the flight to Hong Kong with little difficulty. It was somewhat depressing to find myself enclosed again by aluminum and plastic. It had been another marvelous adventure in an out-of-the-way corner of a strange land and in a park of enchanted canyons and pinnacles. And I will always remember the woman in red.

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Chapter 6

MOUNTAIN OF THE DEVIL

“Again, the devil taketh him unto an exceeding high mountain, and sheweth him all the kingdoms of the world, and the glory of them.”

From the Bible. Matthew 4:8.

The highest mountain in Baja California, Mexico, is a legendary peak known to the locals and all who attempt to scale her awesome walls as “El Picacho del Diablo” or “The Mountain of the Devil”. While the official name according to the Mexican government is “Cerro de la Encantada (The Mountain of the Enchanted)” and the mountain was known to some for many years as “La Providencia (The Providence)” the name, El Picacho del Diablo, seems so appropriate to all who have walked in its shadow that it is doubtful that it will ever be known by any other name.

This magnificent mountain is a part and yet not a part of a massive block of granite that rises from the parched desert of Baja California about 100 miles south of the US border and 30 miles inland from the dusty village of San Felipe on the shores of the Sea of Cortez. The range itself is called the Sierra San Pedro Martir most of which consists of a wooded tableland between 8000 and 9000ft above sea level. On the west, the land rises to this elevation through a series of rolling benches mostly covered in scrub and mesquite bush. The eastern edge is much more dramatic with great yellow granite cliffs soaring into the sky. In terms of vegetation, the tableland on top is quite a contrast to the desert below. Lush meadows and stands of fir and cedar are interspersed with delicate aspen groves. Great heaps of boulders, granite knobs and “chicken heads” protrude in many places as if to remind the explorer of the essential ruggedness of the land. To protect this beautiful place, the Mexican government in 1947 established the first National Park in Baja, the “Parque Nacional Sierra San Pedro Martir”.

The only road into this park is a tortuous ribbon of gravel and rock that leaves the paved road, Highway 1, about 80 miles south of Ensenada and climbs over the benches to the west of the tableland, eventually, 50 miles later, arriving at the gate to the park. Along the way it passes two small villages, San Telmo and Sinaloa, and, higher up, the Meling Ranch, about which more later.

The high points of the tableland are on the extreme eastern rim and the highest of these is the 9450ft peak known as Cerro Botella Azul or “Blue Bottle” though even this does not rise more than about 1000ft above the meadow. El Picacho del Diablo is part of a sharp ridge that protrudes to the east of the main massif. This ridge stretches east from Blue Bottle and then turns north, forming between it and the main block a dramatic chasm known as Canyon del Diablo. This canyon begins just below Blue Bottle, travels north about 15 miles and then plunges eastward through a gap in the mountains to emerge in the desert and form a great dry lake, Laguna Diablo, that is part of the San Felipe desert.

In his book “Camping and Climbing in Baja” John Robinson describes El Picacho del Diablo as “... *truly one of the finest mountains in North America. Composed of huge slabs of fractured granite, precipitous, almost inaccessible, towering almost two miles into the clouds, the peak is a challenge to climb, a wonder to look at.*” It was first climbed by the legendary Californian explorer and map-maker, Donald McLain, who, after viewing the mountain during a surveying trip in 1905, returned in 1911 determined to conquer it. His account of the ascent from the west makes it sound deceptively easy. Others who followed found it much more difficult than at first appears. This is particularly the case when approaching from the tableland to the west, the route taken by most of the early explorers. Viewed from that vantage point it seems deceptively close. Some tried to traverse the ridge that extends from Blue Bottle to El Picacho only to encounter crevasses and knobs (“chicken heads”) requiring technical climbing gear and considerable time and effort. Others recognized the need to climb down from the tableland into Canyon del Diablo only to find it difficult to find a way up the mountain from below, in part because of the impossibility of seeing the peak until one is almost at the top and in part because of the existence of many blind canyons. After McLain’s conquest, more than twenty years would pass before the second ascent by a group of six Sierra Club mountaineers in June of 1932. They set out from the tableland for what they thought would be a day hike along the ridge. Two days later they returned having reached the summit, but also having acquired a very healthy respect for the mountain. In the years that followed the mountain was climbed both from the east and from the west, but it was not until the fifties that Bud Bernhard discovered and described the one route up from Canyon del Diablo that requires no real technical climbing. This is known as Slot Wash and is the route that we were eventually to follow.

These days successful ascents are made just about every year and many hundreds of climbers have experienced the majesty of El Picacho del Diablo. As with any challenging endeavor, there are also mishaps. In 1967 two Claremont College students, Eleanor Dart and Ogden Kellogg, were lost for almost a month before Bud Bernhard found Dart wandering in Canyon del Diablo. The two

students were lucky to escape alive. That same year another climber was not so lucky. He had a heart attack and died while toiling up the precipitous Slot Wash. His friends buried him in a side canyon and continued on to the top to record the events in the summit register.

Sometime during the summer of 1991 I was browsing in my favorite outdoor shop, Sports Chalet in La Canada, when I came across John Robinson's little book. Upon a whim I bought it, thinking it might be fun to return to Baja and camp on the beach. I had never heard of El Picacho del Diablo before, but as I read Robinson's account of its history and the challenge it presented to mountaineers I became increasingly fascinated. Here was a truly awesome challenge and yet one that might just be within my power to conquer. I lent the book to my hiking companion Doug Hart and it had a similar effect on him. In fact, he went out and purchased his own copy of the book. In the ensuing months we often jokingly referred to the possibility of an expedition to climb the mountain, but it was not until the end of 1991 that we seriously began to consider a plan. Early on we decided to take the "easiest" route, involving very little technical climbing. This consisted of an approach through the eastern desert to a trailhead near the mouth of Canyon del Diablo. A long hike up the canyon would then take us to a base camp near the head of the canyon. The next day would involve a strenuous, all-day climb from this base camp up through Slot Wash to the peak and back down. The last stage would be a return hike down through the canyon. In February and March of 1992 we began to prepare for such a trip during the Easter break. It was my feeling, erroneous as it turned out, that we might be better off if we added a couple of others to our party. Several people at Caltech expressed interest, but, in the end, only a first year graduate student by the name of Steve Walton joined the expedition.

So it was that in early March of 1992 we made final preparations for our expedition to "El Picacho del Diablo". In addition to our normal hiking gear we acquired 50ft of climbing rope and a number of carabiners for the few places where such gear was apparently helpful or recommended for safety reasons. We had read of the waterfall at the entrance to Canyon del Diablo that, though only about 4ft high, was difficult to pass because of the depth of the pool and the smooth vertical walls on both sides. Pondering this obstacle, I had the idea of carrying a crude 6ft ladder made from 2x4s from the trailhead to the falls and so constructed such a ladder. With all this gear loaded into my 1981 Chevy Citation, the three of us set off at 6.15am on the morning of Friday, March 20, 1992, for our first attempt at the Mountain of the Devil. Little did we know of the trials and tribulations that lay between us and the moment we would conquer the mountain.

To begin with things went quite well. We drove southeast past Palm Springs and the Salton Sea to Calexico on the US side of the border. There we stopped to acquire the obligatory Mexican automobile insurance. It was, perhaps, an augur of things to come when, upon backing out of my parking space next to the insurance agency, I came into contact with the side of another car. Though the damage was not great, the incident was unpleasant. When the woman who was driving the other car failed to get a satisfactory response from me, she decided to

call the police. We waited for them to come and take a report. Unfortunately, the woman had made more trouble for herself because the policeman ended up giving her a ticket for not having any insurance. At the very least, the incident caused us more than an hours delay. Finally, we drove over the border into Mexicali and headed for San Felipe, turning west onto Highway 3 after about 90 miles. About 20 miles from that intersection, we encountered a clearly marked signpost for a dirt road toward “Col de San Pedro Martir”. Four miles of that dirt road brought us to the edge of the large dry lake, Laguna Diablo. About 15 miles long but only a couple of miles across, this dry lake has clearly been formed by the run-off from storms high in the Sierra San Pedro Martir. After some difficulties, we managed to get the car onto the dry lake itself and headed off southwards looking for the dirt road that led from the other side of the dry lake to the trailhead. Unfortunately, we missed this turn-off, and found ourselves at the very south end of the dry lake with no dirt road in sight. We then turned around and headed north again, eventually finding what looked like the right dirt road heading west toward the mountains. This we followed for about four miles, eventually reaching a point where the road petered out. We were all fairly sure we were now on the right track though we had no way of being certain. It was, incidentally, a very beautiful spot for, in a strip of the desert close to the mountains, there is sufficient moisture to create the most magnificent cactus garden I have ever seen. Growing out of the sand and rock was a vast array of cacti of all shapes and sizes from giant Cardon cacti to whispery Ocotillo and the most delicate small cacti. And we happened to have encountered them when many were flowering.

All of this induced a sense of well-being as we prepared to set off on our hike. Our instructions indicated that we should proceed northwards parallel with the mountains in order to locate the mouth of Canyon del Diablo. So we set off in a jaunty mood, taking turns to carry one end or the other of the ladder. However, the mood began to shift as we began to encounter increasingly difficult terrain without any sign of a canyon mouth. So it was that we came to a halt in the gathering twilight after about three miles of hiking and, reluctantly, reached the conclusion that we had come up the wrong road and would have to retrace our steps. At this point a minor rebellion occurred for Steve and Doug refused to carry my “silly” ladder back across the desert to the car. The ladder was unceremoniously propped up against a giant Segora cactus and left standing there in the middle of the wilderness. If anyone ever happens by that spot, they will be greatly puzzled by this man-made artifact in the middle of the desert. Other than this light moment, the trudge back to the car through the gathering darkness was depressing, and, by the time we got back, it was very dark indeed. We ate dinner and settled down for the night, sleeping in the sand by the side of the car.

The next morning we set off again on our search for the right trailhead. Back on the dry lake, we drove northward again until we encountered clear markers for “Rancho Santa Clara” that we had missed the previous day. These led to a dirt road that was clearly the right one, and we followed it past a primitive ranch and corral and through about 5 miles of scrub to a trailhead containing several

old wooden shacks and various leftovers from previous hiking expeditions. Two other Americans were camped there and provided the final proof that we were now on the right track. However, they also spoke of how difficult the hike up the canyon was and of the even greater difficulty of climbing the mountain. They also observed, as had we, that the top of the mountain was covered in snow. The book indicated that the final stage of the climb was difficult even in the absence of snow. I began to doubt that there was any chance that we could make it to the top.

Nevertheless, with the enthusiasm of morning, we set off across the desert to find the elusive entrance to Canyon del Diablo, a task that was now easily accomplished. The stream leaving the canyon was quite full and provided assurance of a reliable water supply. As we left the desert and entered the canyon, it became clear that we were in for another scenic treat, for the stream had carved a magnificent gorge through these mountains, creating great granite cliffs and a canyon bottom with huge boulders and beautiful pools filled with crystal clear water. We stopped frequently to admire this rugged grandeur. But we also made slow progress because of the frequent need to climb around waterfalls or over giant boulders. Early on we were faced with the waterfall at the entrance for which the ladder was designed. Fortunately, someone had fixed a pin in the rock high on the left-hand wall and from this pin hung a steel rope. Douglas climbed up and fixed our own rope to the pin and we used this to swing ourselves and our packs up and over the waterfall. However, as we proceeded up the canyon, Steve began to labor. It became depressingly clear that he was not physically capable of hiking any great distance under such tough conditions. Shortly after midday, we reached a pleasant little campsite on a elevated sandy bench where we sat down to have lunch and evaluate our situation. Steve did not think he could go any further that day and yet we had only come a few miles up the canyon. There were, at least, another tough ten miles ahead of us before we would even reach the base camp. We encouraged Steve to sleep and, as he did so, Douglas and I conferred. We could not leave Steve overnight and it was clear that it would be pointless to drag him any further up the canyon. We had no option but to abandon our attempt on the mountain of the devil while consoling ourselves with the thought that, at least, we had conducted a useful scouting expedition. In that vein we fed Steve some Gatorade and left him to sleep while we explored about another two miles of Canyon del Diablo. We returned to camp with enough daylight left to climb about 1000ft up the canyon wall using a steep wash. From that vantage point we could make out the summit of El Picacho del Diablo and, on the opposite rim of Canyon del Diablo, the Mexican National Observatory. It was clear to us that we had greatly underestimated the effort it would take to conquer this magnificent mountain.

That night I slept soundly after the physical efforts of the previous day. We awoke to a beautiful dawn and, after breakfast, started our return trip out of Canyon del Diablo. This was uneventful though we had some excitement at the entrance waterfall where we met another group of three young hikers. They were attempting to transport their large dog over that obstacle in one of their backpacks. The dog was amazingly docile during its very precarious transit.



Left: Entering Canyon del Diablo. Right: 4ft Waterfall.



Left: El Picacho from observatory. Right: Citation's last stop.



Left: Climbing toward the summit. Right: The summit of El Picacho.

Back at the trailhead, we wasted no time in loading the car and retracing our steps down the dirt road, past Rancho Santa Clara, across the dry lake and onto the highway. We drove almost straight back to Pasadena, stopping only for lunch along the roadside south of Mexicali. We arrived home about 7.00pm, having had a most interesting and enjoyable time even though we had not come anywhere close to our objective. Nevertheless, both Douglas and I were quietly determined that this devilish mountain was not going to defeat us; we were both sure that, someday, we would return to Canyon del Diablo and El Picacho del Diablo.

As we reflected on our first attempt during the weeks that followed, we realized that the period during which one could expect reasonably comfortable weather conditions for the ascent of El Picacho del Diablo, was very narrow indeed. The winter and spring seemed to be excluded because of the snow at the summit. On the other hand, the summer temperatures in the desert are in the 100° to 110° range. This left only the fall, preferably late fall, when the desert temperature has fallen and before the snow arrives at the higher altitudes. As I looked forward to the future, I realized that Douglas would be leaving to take up his faculty position at MIT at the end of 1992, and that I would be spending most of the fall of the same year on sabbatical at Oxford University. Our window for the foreseeable future was reduced to a few weeks at the end of September 1992.

So it was that Douglas and I set off at 5.00am on the morning of Monday, September 21, to make our second attempt to climb the peak of the devil. The temperature in the desert was quite high, and we were concerned about a series of tropical storms that were traveling northeast over Baja and southern California. At least we did not have to worry about snow at the higher elevations. Our plan was the same as before except that, by making an early start and with knowledge of the route to the trailhead, we hoped to hike several miles into Canyon del Diablo before nightfall. This seemed eminently feasible as we crossed the border and drove over the desert toward San Felipe. Turning inland, we reached the dry lake, Laguna Diablo, before midday and managed to get the car onto the lake bed without too much difficulty. So it was that we set off across the dry lake bed in a direction we judged would lead to the right point on the far side.

Suddenly, and with little warning, adversity struck. Incredibly, I saw what I thought was water approaching us across the dry lake bed, and swerved to avoid this extraordinary phenomenon. Though only a few inches deep, the water caused the otherwise firm surface of the dry lake to become an instant quagmire in which the car would have become inextricably mired. At one point we did drive across a small rivulet and only just managed to get through it. Apparently, a storm, which we could see perched over the mountains, had released enough rainfall to create a flash flood that poured out of Canyon del Diablo to wet the dry lake for, perhaps, the only time this year. We were very fortunate that our second attempt did not end with the Citation stuck for ever in the middle of Laguna Diablo.

Having recovered from our astonishment, we began to try to find a way

around the water. However, this had spread on such a wide front that it rapidly became apparent that there was no possible access to the trailhead some seven or eight miles away. We briefly considered hiking to the trailhead but we were not even sure that it was safe to try and walk across the mud. We retreated to the dry side of the lake, and stopped to consider the alternatives. As we sat there, a magnificent white stallion came into view and pranced across the flats with several other horses in its wake. An omen, but for what? Perhaps to remind us of the majesty of nature and of the unpredictability of the mountain on which we had set our sights.

We could simply abandon, this our second attempt upon the mountain of the devil. But, if we did, when would we ever have the chance to make a third attempt. Or we could wait for the lake to dry. But neither of us had any idea how long this would take and, in any case, our confidence in the integrity and reliability of the lake bed had been severely eroded. Another possibility would be to try and approach the mountain from the west rather than the east. But this would require a long and arduous detour of about two hundred miles as well as a difficult sixty miles of dirt road leading up to the tableland. In the end, we decided that we would not be defeated by this mountain and that the greatest chance of success lay in the approach from the west. So it was that we drove back to the road that crosses the peninsula from San Felipe to the Pacific Coast, and began the detour by driving 100 miles northwest to Ensenada. There we turned south and drove 85 miles through Santo Tomas and San Vicente to the point 10 miles south of Colonet where we were to leave the asphalt highway. It was with some trepidation that we turned left off Highway 1 onto the rough dirt road that leads, eventually, to Sierra San Pedro Martir National Park, some 60 miles to the east and some 8000ft higher. Initially, we made slow and steady progress, often climbing quite steeply from bench to bench as we ascended the mountain range. We drove through the village of San Telmo, and, after 30 miles, passed the Meling Ranch. This 10,000 acre cattle ranch dominates the western foothills of the Sierra San Pedro Martir. Founded by the pioneering Meling family in the early 1900s, the ranch house was rebuilt after it was destroyed in the 1911 revolution. The Meling ranch has, for many years, been a favorite, out-of-the-way resort for those who enjoy remote spots. It dominates this entire area including the National Park.

After passing the Meling Ranch, the road again climbed steeply toward the tableland, and the flora began to change from desert scrub to firs and aspens interspersed by meadows. It was on this remote stretch of gravel, as the sun was setting, that the old Citation finally began to show serious signs of distress. The slipping of the transmission began slowly, and was initially avoided by running in low gear. I had detected signs of transmission failure early in the trip but had chosen to press on. As I tried to nurse the old car up the hill, the slipping increased dramatically and clouds of smoke began to appear. We made it through the gates of the National Park but, about a mile further, the transmission quit completely for the first time. It was now very dark and we were utterly alone many miles from anywhere with no means of transportation other than our legs. It was a somewhat worrying situation. We waited for a little while to see if the

transmission would work better after it cooled. When it was topped up with transmission oil, we tried again and managed to go another mile or so before we again came to a halt in a cloud of smoke. There was nothing more that could be done, and so we made camp by the side of the road. Perhaps, the morning would suggest some way out of our predicament. Curiously, two large trucks passed by in the night but it was too dark to make out anything other than their silhouettes. It seemed to me that the coyotes howled quite ominously that night.

The bright and crisp morning improved our spirits and revealed a number of options. We could try to drive the Citation down the mountain. But the downgrade included some upgrades that I doubted we could surmount. And there seemed no hope that the car could make it back to the USA. On the other hand, perhaps it would be best to dump it here where we would not be observed and then wait for a ride down the mountain in a truck such as had passed us in the night. But that meant dumping a lot of general gear that I kept in the car; and the thought of the long slow ride back to the US in a beat-up Mexican bus was not very appealing. However, a third alternative began to form in our minds based on the Observatory that was apparently located some four or five miles further up the mountain, indeed at the end of the dirt road. We suspected, correctly as it turned out, that the trucks were part of the normal traffic to and from the Observatory. We also thought it likely that the Observatory would have a means of communicating to the outside world, and that we might be able to use this means to seek help from home. We even considered the possibility of continuing with our assault on El Picacho del Diablo if we could arrange to be picked up some three or four days hence. After some discussion, we settled fairly quickly on this last plan. So, again, the transmission was filled with oil and we crossed our fingers hoping that the car still had a few miles left in it. Such turned out to be the case, and we managed to climb the last few inclines before emerging onto the large meadow called Vallecitos that comprises the tableland and the heart of the Sierra San Pedro Martir National Park. As we sped across the flat meadow, we spotted the observatory on a ridge to the east. We left the car at the bottom of the incline leading up this ridge, and walked the last couple of miles to the Observatory.

A group of cruciform Quonset-like huts set amongst the pines formed the hub of the support facilities for the Observatory. We approached cautiously, in part because of two loudly barking dogs, and in part because we were uncertain of the reception two wandering gringos would receive. There were a number of people hanging around but none took much notice of us, so we headed for the hut that seemed to contain the canteen. It was breakfast-time and the canteen was filled with people. After a pause, a young man stepped forward to greet us; we took him to be the foreman for he emanated a sense of authority confirmed by the walkie-talkie at his belt. We tried to explain our circumstance but it was clear that he spoke little English. I then turned to an older man who had a look of easy authority and whom I guessed was an astronomer. He had initially seemed unwilling to become involved but, when approached, was most cordial and, luckily, spoke excellent English. The two men, the foreman and the

astronomer, conferred with us and with each other. First, it was decided that I should compose a message that would be radioed to their office in Ensenada; the operator there would then telephone the desired party at Caltech and relay the message to them. Doug and I had decided that the best idea would be to call the Mechanical Engineering Office at Caltech where either Jackie or Dana would be sure to be present to receive the message. So it was that we sent off a brief communique telling of our car trouble and asking Yan to come and get us at the Observatory on Thursday, some three days later. Yan Kuhn de Chizelle was a French graduate student of mine with some knowledge of our plans and an automobile that we thought capable of making it up to the observatory. More specifically, we asked Yan to meet us at 2.00pm on Thursday at the white gate in Vallecitos meadow on the tableland below the Observatory. The white gate was chosen because it was an unmistakable point on the road through the meadow, and because we could hike there from the trailhead without having to climb to the Observatory. We could only hope that the message would not become too garbled as it was translated into Spanish and then back into English.

This accomplished, we had to make appropriate arrangements to dispose of the car that, in its present state and location, was worth negative dollars to me. I therefore decided on a grand gesture that I was fairly sure would impress our new friends. Thus I approached the foreman (who had arranged the message transmission) and told him that I wished to give him the car. I think that both he and the astronomer were somewhat startled by this gesture but also surprised and pleased by it. Our relationship with them that had begun to warm when they discovered that we were from Caltech, was enhanced considerably by the offer of the car. They drove us back down the hill to the car that I was able to drive up to the observatory since the transmission had had time to cool.

By this time we had discussed our planned assault on El Picacho del Diablo with our Mexican hosts. It so happened that the astronomer was also a mountain climber and, most remarkably, that he had, that very morning, returned after a successful four day climb of the peak with a visiting French astronomer. This common interest strengthened the bonds of our new friendship; they supplied us with a better local map showing the best route to and up the mountain. And, when it came time for us to head off on our hike the foreman, Alfredo, and the two astronomers decided to take us to the best starting point in their four-wheel-drive Jeep. Thus we drove down to Vallecitos meadow and turned south along a narrow, dirt track, traveling in a southeasterly direction for several miles until the track became so rough even the Jeep could go no further. Here we parted company with our Mexican friends and set off for El Picacho del Diablo. For the first time we had some confidence that we might finally be able to conquer this devil.

Initially, the trail was fairly well ducked and wound its way up a very beautiful valley with a mix of trees, firs, cedars and aspens whose leaves were beginning to turn yellow and red. Further up this valley the trail became less distinct and seemed to divide. We followed a line of ducks that led in a more southerly direction than I would have liked but we assumed that the ridge above us was the edge of Canyon del Diablo and therefore it did not matter very much how

we climbed it. However, when we reached the top of the ridge, it was clear that we still had some way to go before we would reach the edge of the canyon. Mistakenly assuming that the mountain ahead of us was the 9450ft Blue Bottle, we left the poorly ducked trail to climb this peak for our climbing notes recommended that we do in order to get our bearings. When we reached this summit, I managed to persuade Douglas of our error and the need to return and find the earlier trail. This we did in a somewhat dispirited mood for it was proving much harder than we anticipated to get to the edge of Canyon del Diablo. While Doug prepared lunch, I climbed a nearby rock pile in order to try and determine our location. After lunch, the trail began to climb more steeply and we grew increasingly pessimistic for the hours of daylight were dwindling. Finally, and rather suddenly, we arrived at a rocky peak, the top of Cerro Botella Azul (Blue Bottle) at 9450ft. The view we expected unfolded in awesome majesty before us. The bottom of Canyon del Diablo lay almost a mile below us and yet, rising again on the other side, was an immense buff-colored wall that culminated in the twin peaks of the magnificent El Picacho del Diablo. It was quite overwhelming; on a cerebral and physical level it challenged me; on an emotional level I had great difficulty believing that it was possible for me to climb it.

But we could not dally long for time was of the essence. It was clear that we would have to make it to the bottom of the canyon before sunset. The next obvious objective was the saddle to the north and about 1000ft below Blue Bottle. Fortunately, a ducked trail seemed to lead down the steep slope toward this objective and we reached it with little difficulty. From there we knew that we had to contour around the south wall of the Canyon Diablo to our right before attempting to descend. The more direct route straight down is known as Gorin's Gully and contains several vertical sections requiring ropes and technical climbing gear. Such difficulties can be avoided by contouring far enough around to a large rubble strewn gully known as Blue Bottle Wash. Fortunately this route was well ducked and we found our way fairly readily to the wash and began to descend. There were several difficult places during the descent where large blocks of granite had created substantial obstacles and each of these required some route finding and some climbing. But, for the most part, the descent was very long and extremely hard on the legs as we stepped from boulder to boulder. We could not afford to stop for any extended periods for it was clear that we would only just make it to the canyon bottom before nightfall. Such haste is often unwise and so it proved in this case for both of us suffered falls. Fortunately I escaped relatively unscathed. Douglas, on the other hand, sprained his ankle quite badly and was thus handicapped for the rest of the trip. The Motrin which I happened to have with me proved invaluable in easing the pain of the ankle while, at the same time, providing muscle relaxant.

Though the descent seemed endless we did, indeed, reach the bottom just before nightfall. The need to do so was not dictated by the desire for a comfortable campsite but by the more basic and essential need to find water. Indeed, we had run out of water about two thirds of the way down the wash. Therefore, it was a great relief to come upon a small but sparkling waterfall tumbling out of a side canyon to form a clear and inviting pool of water directly ahead of us.

Having sated our thirst and refilled our water bottles, we pressed on through fairly thick brush to find a suitable campsite for the night. Fortunately, we had only to go a few hundred yards before we came upon a small flat clearing by some rocks and another pool and, with relief, we shed our packs and quickly made camp. After dinner, we bedded down to try to get as much rest as we could before the major effort of the following day. It was a beautiful, still night. We had been lucky with the weather; though we had seen a number of thunderstorms in the distance none had come our way.

Perhaps we should have made an effort to arise before sun-up but the efforts of the previous day required as much recuperation as possible and so the sun arose with us. The weather seemed ideal and our excitement grew as we began preparations for the final assault on El Picacho del Diablo. We correctly surmised that we were still some distance upstream of Camp Noche, the starting point for the ascent of the mountain. Nevertheless we decided to stow our packs at this pleasant little site and to return here after our climb. There seemed little point in carrying our heavy packs down to Camp Noche and then have to bring them back up. I had brought along two large plastic trash can liners and, to be safe, we covered our packs before we left. So we set out on the final leg of our ascent with just one light day-pack.

As we proceeded down Canyon del Diablo, we were able to identify several reference points. After a few hundred yards, we encountered a clearing surrounded by thin logs on a bench to the west of the stream. This small site was Camp Cedaroak at an elevation of 6600ft. About a half mile further downstream, we came upon Camp Noche (6300ft), a larger site on a bench to the east of the stream. An enticing swimming hole nearby helped to confirm our identification. We also found a small Mexican flag that had been placed in the middle of Camp Noche by the preceding expedition led by our astronomer friends.

We wasted little time in embarking on our ascent of the large, shallow gully immediately above Camp Noche, named Night Wash by a group from UCLA who had descended this way after night had fallen. It is a steep but easy climb up a rocky slope that eventually reaches a saddle at about 7400ft. This saddle leads to the much larger gully known as Slot Wash. The reason for this sideways entrance into Slot Wash is that the latter is too steep to be climbed in its lower reaches. From the Night Wash Saddle we contoured around and then dropped into Slot Wash. Here the going became significantly harder because one had to surmount many large boulders and a few steep falls. About 7800ft we were pleased to encounter running water and stopped by a small pool to refresh ourselves. It was clearly going to be a very tough climb, not so much because of the height but because the terrain was extremely rough. Moreover, while the route was well marked by ducks for some stretches, there were others in which ducks were few and far between. Worse still, there were ducked trails that went off in what were clearly wrong directions. Thus there were numerous stops for navigational purposes, and there were many times when we were quite unsure whether or not we were on the right path (though that word was quite alien to the terrain in which we found ourselves). However, as we proceeded to thread

our way past the boulders of Slot Wash, we did not have too much difficulty in identifying the prominent rock mass that divides the Wash at an elevation of 8200ft. Here, our navigational notes told us to take the left branch but, almost immediately, we had to climb onto a shoulder on the left side of the canyon in order to circumvent several large waterfalls. This was the most dangerous part of the ascent and a slip could have been fatal (on the way down I persuaded Douglas to anchor me with a rope while I negotiated these sections). Having completed this stretch of the climb we came upon a junction where I made the only serious error in navigation. We had climbed a rough dirt and rock slope to a point where a steep wash branched off to the north; the ducks appeared to lead in this direction. According to our notes, we needed to find a wash like this, called "Wall Street" that would lead us directly up to the north summit of the mountain. At this point, I should explain that the summit of El Picacho del Diablo consists of a very steep and ragged ridge of granite. At each end of this short ridge are the north and south summits measuring 10154ft and 10152ft respectively. It is a difficult, technical climb to get from one summit to the other, for there are several gaps and knobs that present substantial obstacles along the granite ridge. We sought the branch to Wall Street for that would take us to the north summit whereas to continue straight would take us to a point midway along the summit ridge. The reason I chose not to take the steep wash that I now suspect was Wall Street, was because it appeared to be headed north and I thought Wall Street was in a northeast direction. Therefore, we contoured around to our right in an attempt to find Wall Street. We found ourselves in a steep narrow wash which, at the time, I thought was Wall Street but that was, in fact, the upper reach of Slot Wash.

We were now very excited about the fact that the summit of El Picacho del Diablo was but a few hundred feet away. At the same time, we were quite exhausted and so struggled up the last few hundred feet to the summit. The last fifty feet or so were over bare rock and culminated in a sharp ridge. Then, quite suddenly, a truly awe-inspiring vista exploded before our eyes and I felt as though I had been propelled into space. The drop on the far side, to the east, was several thousand feet straight down. We could see the notorious dry lake 10000ft below us and could even discern the various dirt roads leading to and from it. Beyond this lay the inland coast and the Sea of Cortez. Turning around to look back in the direction we had come, we could make out the Pacific Coast through the desert haze. Most mountain summits evoke a sense of exhilaration and that emotion is heightened when the climb is difficult or when the view is spectacular. In this case, not only had we expended great effort and overcome substantial difficulties but also the view was truly mind-blowing. I was overcome, even frightened, though I was in no danger. It was an experience that I doubt I will ever have again because I think the climb taxed me to the furthest limits of my physical and emotional resources. I had met the devil and had survived. And, still, this mountain was like a magnificent, wild animal that should forever remain unshackled. We never, in fact, reached the actual north summit for it was a few yards away and a few feet higher. We were separated from it by a knob and a gap that would have required rock climbing expertise

and equipment to traverse. While we had reached the top of this mountain, in some strange way it seemed appropriate that we had to leave the absolute summit untouched. We had developed a special, mystical relation with this mountain that would be with us the rest of our days.

But time was short and we had to start to descend to have any hope of reaching our camp site before dark. We were also concerned about the very active thunderstorm that we could see off to the west in the vicinity of the entrance to the Park. Up to now the weather had treated us very kindly for the summit ridge is often hidden in cloud and had, in fact, been so hidden the previous day. El Picacho was not yet finished with us and had at least one more surprise for us resulting from this storm that we could see in the distance. But the weather was just fine during the early part of our descent. We made good time because it was quite easy to navigate, retracing the route we had taken on the way up. We tried to hustle along because it was becoming evident that we would not make it to the bottom of the canyon before nightfall and we were apprehensive about finding our way in the dark. Then it also began to rain. We donned our waterproof jackets though not the pants since they would have been torn to shreds. Fortunately, we only felt the edge of the storm and the light rain soon abated. Of more concern was the impending darkness. We reached the saddle leading from Slot Wash to Night Wash while it was still light and so it only remained to descend through Night Wash. Douglas, fearing the darkness, set a very rapid rate of descent. Trying to keep up, I took one head-over-heels fall, fortunately without injury. Darkness fell but we reached Camp Noche in the bottom of the canyon without further incident. There we rested and took advantage of the pause to congratulate ourselves on our conquest of El Picacho. The elation persisted as we made our way by flashlight up Canyon del Diablo to our camp site about half a mile upstream. I was glad that I had noted in my mind the fact that there was a large, fallen tree lying across the gully just downstream of the campsite for we might otherwise have had difficulty finding it in the darkness. We were also thankful for the trash can liners that had kept our packs and all our stuff dry during the rain.

It had been an extraordinary physical effort for me that day, and, by the time we returned to camp, I only wanted to climb into my sleeping bag. This I did while Douglas cooked and ate dinner. Both of us slept soundly after all our exertions and awoke at dawn to another bright and clear morning. We anticipated a long and tough climb up and out of the canyon while carrying our packs and such proved to be the case. One must be careful not to leave Blue Bottle Wash too soon to begin contouring toward the saddle on the rim below Blue Bottle. But mostly it was a hard slog punctuated by rest stops during which we could again admire the magnificent view behind us. Finally, we reached the Blue Bottle saddle about lunchtime and so paused for Top Ramen. Thus replenished, we began the gentle descent through a shallow valley traveling northwest in the direction of Vallecitos meadow. We soon discovered that we still had much further to go than we imagined but the going was fairly easy, and we knew that, as long as we headed northwest, we had to intersect the dirt road along which we had traveled to the trailhead when we began our hike. The

trail was initially very well ducked and passed through some beautiful aspen groves. But it then seemed to evaporate and we crossed from one canyon to another on several occasions. Finally, we came upon the trail again in a flat, sandy-bottomed canyon and were able to follow it all the way to the dirt road. This was the very first point at which we thought we might possibly encounter Yan if he had indeed come to get us and had learned of our route from our friends at the Observatory. That seemed a really long shot, so we were not at all surprised when we found no-one at the junction with the dirt road. After a brief rest, we set off to walk along the road to Vallecitos meadow. We were both quite exhausted and hoping that Yan would show up at every turn. But there was no sign of anyone and, after about three miles, we reached the junction with the main dirt road to the Observatory. There we sat down beside the road somewhat dejected. Not only was there no sign of Yan but I could not remember whether the white gate was to the east or west of us. I volunteered to hike along the road in order to try and find the white gate while Douglas stayed by the packs. But I had gone only a short distance when we spotted the cloud of dust associated with a vehicle coming up the road. Our spirits rose only to fall as the vehicle came into sight and proved to be a beat-up old pick-up instead of Yan's Subaru. It was loaded with a refrigerator and other supplies clearly headed for the Observatory. I tried to find out from the driver whether or not he had seen anyone waiting by the white gate further down the meadow but this was much too complex an issue to have any hope of communicating given the severe limits of our common language. I did not want the driver to begin to question our sanity and so switched to a much simpler request, namely that he give us a ride to the Observatory. Thus we completed our epic hike to El Picacho while hanging on to a refrigerator bouncing along in the back of a pick-up truck. At the Observatory, there was no sign of Yan or any other rescuer. We were, however, greeted by our new friends who seemed pleased that we had returned safely though they were clearly somewhat amused by our bedraggled appearance. Both my shorts and Douglas's new hiking pants had been torn to shreds by the rocks of El Picacho. At least Douglas's pants had provided some protection; my knees, on the other hand, were almost devoid of skin.

We sought out our English speaking astronomer friend to find out whether he knew anything of Yan's whereabouts. He radioed our other friend Alfredo the foreman who was somewhere out on the road. The story that was relayed to us from Alfredo made little sense to us. Apparently two women had come to rescue us but had been stopped at a point on the dirt road up to the tableland by the fact that the storm of the previous day had washed out part of the road. Who these two women were was a mystery to us. Apparently, Alfredo had taken a four-wheel-drive truck down to the point where the road was washed out in order to inspect the damage. There he had found the two women and was driving back up to the Observatory, bringing them with him. They would arrive in about a half-hour. But, at this point, I must backtrack to tell of the events that were set in motion when our original message was radioed down the mountain.

Apparently, the telephone and radio operator in Ensenada had called Caltech

and Dana Young, one of the secretaries in the Mechanical Engineering Office, had taken the message that told of our car trouble and of our request for Yan to come and rescue us on Thursday. Also received were some instructions on how to find the turn-off for the dirt road to the Observatory. Though we had tried to couch the message in as low a key as possible, it inevitably caused significant consternation. The first problem was that Yan, having a French passport, had serious doubts as to whether he could get back across the border into the US. On the other hand, Beth McKenney, another graduate student of mine, was used to the mountains and seemed eager to be part of “the rescue”. She and Ann, Douglas’s wife, decided that they would drive Douglas’s Volvo down to the Observatory. They even started out on Wednesday evening and stayed the night in San Diego before crossing the border on Thursday morning. They had some difficulty identifying the turn-off onto the dirt road leading to Observatory but made good progress up that road until halted by the washed-out road just beyond the gate to the National Park. Indeed, their circumstances had become quite problematic since they no longer had sufficient gasoline to get back to the highway. They were very fortunate to meet up with the group from the Observatory who were inspecting the damage to the road. In any case, it was clear to all that Ann and Beth would now, also, need to seek refuge at the Observatory. So it was that, after the gate attendant had helped park the Volvo beside his cabin, they set off with Alfredo on his way back up the mountain. It was dark before they reached the Observatory and we were finally able to identify *“the two women who had come to rescue us”*. We were delighted to see them and excitedly swapped the stories of our respective adventures. Our hosts quickly arranged a room in one of the cabins where the four of us could camp out for the night. Then we all repaired to the canteen for dinner and an impromptu party at which I was introduced to the local delicacy, roasted pine nuts.

The rest of the story is briefly told. The next morning the four of us walked the mile or so to the telescopes perched on the rim above the rest of the Observatory facilities. We did this for a last look at El Picacho and the magnificent view of the desert and sea to the east. Then our hosts loaded us and all our gear (including the stuff from my car) into a pick-up truck. We said our goodbyes to my car and to our marvelous hosts who could not have been more helpful to us, and set off for the ride down the mountain. The morning was again clear and bright and it was exhilarating to stand in the back of the pick-up and to enjoy this beautiful land as it swept past. We crossed the washed out road with little difficulty and then loaded all our stuff into and onto the Volvo. The Observatory staff had even given us some cans of gasoline and we were, therefore, well supplied for the drive down the mountain. It was necessary to negotiate some damaged sections of road just below the gate but, after that, we made steady progress down to the paved Highway 1 and north on that road to the US border in Tijuana. After crossing into the US, it was time for a celebration. We had discovered that it was Beth’s birthday. So in her honor and in celebration of our rescue, we found a small Thai restaurant near San Diego. The food was marvelous and we had a most enjoyable meal though I am not quite sure whether

our impressions were entirely objective given the circumstances. About three hours later, we were back in Sierra Madre. It was very hard to believe that only five days had passed since we set out on our adventure.

So another chapter in my mountain travels drew to a close. We had succeeded in our ascent of the “mountain of the devil” despite the many difficulties that we encountered. Even subtracting those, it had taken a great physical effort that strained my endurance to its limits. I will always be proud of that achievement. But I wonder whether or not it will be that aspect of the adventure that I will remember with most joy. Maybe not. Maybe it will be the example of generosity and kindness shown to two, and later four, strangers by that marvelous group of people at the Observatory. They would not even accept our proffered payment for the gasoline. Maybe, someday, I will be able, in my turn, to provide such help to a foreign adventurer in my mountains. I certainly hope so.

One ironic footnote needs telling. Alfredo, “the foreman”, had written his name and address on a piece of paper for I had promised to send him the pink slip for the Citation when I reached home. At the time I did not look closely at the paper. A few days later I fished it out of my pouch in order to fulfill my pledge only to discover that his name was Alfredo Meling, and therefore a member of the family that owned the entire area. Perhaps I had chosen to give my car to the richest person at the Observatory. I hope not.

Chapter 7

SNOWDON

*“Leave to Robert Browning
Beggars, fleas and vines
Leave to squeamish Ruskin
Popish Apennines
Dirty stones of Venice
And his gas-lamps seven;
We’ve the stones of Snowdon
And the lamps of heaven.”*

From “Letter to Thomas Hughes” by Charles Kingsley.

Dark age sailors, voyaging from Ireland toward their fellow Celts in Wales, were often guided by the snow-covered hills on the skyline that came to be called the Snowy Hills or, in Gaelic, “Snaudune”. Later the name came to be applied to the highest of these peaks, the beautiful, windswept mountain we know as Snowdon, the highest point in Wales. Those from warmer climes, on hearing



Left: On slopes of Snowdon. Right: Summit with Terry Jones.

that the summit of Snowdon is but 3560ft above sea level, might be tempted to imagine it as little more than a hillock. They fail to take into account the fact that, at these high latitudes, the change in climate with elevation is much more dramatic than at lower latitudes. One can drive to the top of Mount Wilson in Southern California and, at 5500ft, hardly notice the change in climate from the basin below. On the other hand, conditions on the summit of Snowdon can be radically different than those just a few thousand feet below. This means that Snowdon is a more challenging climb than one might otherwise expect.

Snowdon is the highest among a group of mountains in the northwest corner of Wales, one of the most scenic and historic regions of the British Isles. It lies in the ancient kingdom of Gwynedd, also the name of the modern county in Wales. On the coast below the peaks stand the remains of some of the most storied castles in Europe. And Anglesey, the island just offshore, is equally historic. Many of the ancient Britons, driven westward by the Roman invasion, found refuge on Anglesey, known to the Romans as Mona. There, these people on the edge of prehistory not only sought safety but also the potential of the arable land of Anglesey. However, in the immediate aftermath of the invasion, the well-populated island represented such a threat to the Romans that the new governor, Suetonius, felt it necessary to organize a campaign to subdue it. Thus it was that, in the year 61 AD, the Romans built a fleet of flat bottomed boats so that their infantry could cross the narrow Menai Straits separating Mona from the mainland. The Britons lined the shore to resist the invasion. They included women clad in black “like the Furies with their hair hanging down and torches in their hands” and Druids screaming encouragement and curses. Though initially shaken the Roman forces overran the island. As always, the history was written by the conquerors who were clearly doing their best to justify their uninvited ravages of a native population. Like many invaders before and since, the Romans proceeded to kill and destroy all they could find, leaving little to allow construct of the other side of the story.

In the centuries that followed the native Princes of Gwynedd, descendants of the ancient Britons, became the most powerful of the Welsh kings, benefiting from the natural protection of the mountains and from the fertile land of Anglesey. In the 1200s, Llywelyn the Great came closer to the creation of a unified Welsh nation than at any other time in history. The region was not overrun by the English until Edward I, following his accession in 1272, determined to extend his dominions and invaded Gwynedd, killing the last of the Llywelyns and destroying the remains of the Welsh resistance. To ensure the subjugation of the region, Edward built a series of formidable castles in strategic locations along the coast. These included the castles of Caernarfon, Beaumaris, Conwy and Harlech, that remain dominating features of the coast around Snowdonia. Edward also offered his first-born son to the Welsh as their new prince in a ceremony at Caernarfon castle that has been repeated by English monarchs ever since. The current Prince of Wales was so designated by Queen Elizabeth in a televised ceremony at Caernarfon some years ago. We should also note that the Welsh had some small, symbolic revenge about two centuries after Edward’s invasion when Henry Tudor, with princely Welsh blood in his veins, defeated

Richard III at the battle of Bosworth Field and was enthroned as the first of the Tudor Kings of England. The Welsh like to attribute the vitality of the great Tudor monarchs, Henry VIII and Elizabeth I, to their Welsh heritage, to say nothing of Elizabeth's red hair.

Again, Gwynedd faded into a backwater for many centuries. It achieved brief renown during the Victorian era when the demand for slate promoted the development of large quarries in Snowdonia, leaving livid scars on some of the foothills. There were also smaller-scale attempts to mine copper and other semi-precious metals but these brief efforts were quickly superseded in effectiveness by much richer veins in other lands. Tourism became the major industry in the early years of this century. Holyhead on the island of Anglesey became the major port of embarkation for Ireland and the construction of a railway through Snowdonia to Holyhead enhanced access to the region. Railways, especially of the narrow gauge type, had become a local specialty in order to transport slate and ore from the quarries and mines. As tourism increased, narrow gauge railways were also built as tourist attractions. So it was that a narrow gauge, cog railway was constructed from Llanberis at the foot of Snowdon to the summit. Built in 1896, this triumph of Victorian engineering is the only rack and pinion railway in Great Britain; the 5 mile journey climbs an average gradient of 1 in 7. Today the Snowdon Mountain Railway continues to carry tourists to the summit during the summer months.

In 1951, Snowdonia became a National Park, a belated response by the British Government to the example set in the United States by Theodore Roosevelt about 40 years earlier. Today, it is heavily used throughout the year by a British public for whom it remains one of the few areas of relatively unspoiled wilderness in the British Isles. But, to the American visitor, there remain some intrusions that would hardly be tolerated in the US or Canada. For example, sheep roam freely throughout the Park, the ancient grazing rights of the local shepherds clearly unimpeded by the newly acquired status of the land. Sheep have grazed these mountains (and all others on these islands) for so many centuries that they have become a part of the natural order. One wonders how different the mountains would have looked without the sheep. Other human intrusions do not have the excuse of centuries of habit. Some of the lakes, including Llyn Llydaw, are used as reservoirs, which, in itself, is not necessarily objectionable. However the large diameter concrete pipe that carries water from Llyn Llydaw down toward the local towns and villages is an ugly eyesore, an inexcusable scar upon this land. No attempt was made to bury the pipe; instead it is suspended some feet above ground by regularly spaced concrete plinths that add to its ugliness.

Once, many years ago, I had driven quickly through Snowdonia on my way from Holyhead to London. I had seen enough through the rain and evening gloom to know that I wanted to return some day. And in the fall of 1992 I had an opportunity to revisit many of the places and people of my youth. In that year I traveled back to my academic roots for an all-too-brief sabbatical term in Oxford. Doreen joined me for the first four weeks and we delighted in this opportunity to revisit the city where we spent three years in relative

poverty while I completed my graduate studies. We went to concerts and high table, delighting in the effortless elegance of the senior common rooms of Oxford colleges. We made many lazy tours through the Cotswolds, relishing marvelous meals in the gentle English country pubs. And we strolled through and around the city itself, exploring the many ancient walkways and distributaries of the Thames and the Cherwell. It was one of the best times Doreen and I ever had together and yet it was tinged with sadness for we knew we could not hide away there forever. The four weeks came to an end too quickly.

Left alone for the remainder of the term I busied myself with lectures, academic discussions and visits to other friends in England. My host in Oxford, Terry Jones, had been a graduate student with me in the Engineering Department in the early sixties. I remember many hours when Terry and I had sat and talked over our cigarettes. I suppose we hoped that inspired theses would miraculously materialize out of thin air. He and his wife Lesley were at the same stage as Doreen and I, both with very small children. I had seen Terry very briefly on several occasions since those times. However, it was still surprising how easily we fell into the same pattern of chat, the same easy camaraderie. I have often wondered how it is that we sometimes find other people who fit naturally and easily into our personalities and vice-versa. Almost like two halves of a jigsaw puzzle. Not only do I experience pleasure in the company of people like Terry but I must also admit to a certain analytical fascination. Perhaps if I studied such people sufficiently closely I would find myself in sympathetic silhouette. There seemed to me to be many parallels between Terry's life and my own since our days as graduate students. On the mundane side we had both shed the nicotine devil and had both come to enjoy hiking and solitude. At a deeper level, I could now see in Terry some of the mindless drive that I knew lay within me. But more importantly, I came again to enjoy his company. On several occasions, I had mentioned to him my desire to see Snowdonia and when he suggested that we go hiking there together I eagerly agreed.

So it was that early on a Saturday morning in November, Terry and I set off from Oxford for Snowdonia. The drive is quite uninteresting until one begins to enter the hills of northwestern Wales. Despite the fact that it is the main road to the Irish ferry at Holyhead, the road narrows from a motorway to a winding, two-lane country road by the time it reaches the land of the Welsh at Llangollen. Not only does the quality of the highway decline significantly but, simultaneously, the names on the signposts become strangely foreign. Instructions to motorists are bilingual. Yet the faces of the people and the atmosphere of the villages were oddly familiar to me for they reminded me of my native Ireland, not really surprising considering the common Celtic heritage. Even more specifically one could sense the stern cultural overlay of non-conformism similar to my native Ulster, a feature that gives the villages an iconoclastic bleakness. My eyes see this as unattractive but this judgment is overridden by my affection for the culture and the people.

The road winds through increasingly wooded and hilly terrain and then drops into a very beautiful, forested glen at Betws-y-Coed, a favorite holiday base for outdoorsmen since the turn of the century. The substantial annual rainfall feeds

marvelous rivers and waterfalls, making this area a favorite venue for kayakers and canoeists. Indeed, as we passed through the next village, Capel Curig, it was clear that a substantial kayaking event was being held there.

After Capel Curig, the road climbs toward the mountains around Snowdon and the land becomes bleaker. The trees disappear and the landscape takes on that aspect common to most land above 1000ft in the British Isles. Valleys were covered with heather whose accumulation over many centuries has blocked the easy runoff of rainwater forming many small, cold lakes. The uplands are rocky but have, to some degree, been rounded by glaciation. Only the hardiest grasses seemed to survive on these rugged hills, lashed for most of the year by rain and gales. At higher altitudes even the grasses have difficulty surviving and lichens and mosses become more prevalent.

We drove to the gap through the mountains that is called the pass of Llanberis or Pen-y-Pass at $53^{\circ}4.83'N$ $4^{\circ}1.24'W$ and an elevation of 1205ft. A small group of dark, stone houses on the saddle at the top of the pass service the needs of the stream of hikers who stop here. One of these structures is a well-known youth hostel. We stopped in the crowded parking lot and were immediately approached by a group of very demanding sheep. It appeared to us as though they would attempt to eat just about anything including boots! It required quite vigorous protestation to hold these scavengers at bay. Eventually, however, we organized our equipment and food, strapped up our daypacks and were ready for the trail.

Very crudely, the summit of Snowdon can be visualized as the confluence of six ridges or spines running north, northwest, southwest, south, southeast and northeast from the peak. Glaciation during the ice ages scooped out great amphitheaters between many of these spines, leaving precipitous cliffs on the sides of the ridges. The spine to the north is the broadest and least steep and it is up this route that the railway runs on its way from Llanberis to the summit. Another popular trail skirts the great amphitheater between the northwestern and southwestern ridges; it then climbs the scree to the top of the northwestern ridge and thence to the summit. Actually two parallel trails called the Pyg Track and the Miner's Track follow this route, the former high above the latter. They both begin at the trailhead at Pen-y-Pass, where the road from Llanberis to Capel Curig reaches a saddle summit at an elevation of 1100ft. It was this route that we followed to the top, taking the Pyg Track during the ascent and the Miner's Track for the descent.

The Pyg Track climbs along the north side of the ridge that runs due west from Pen-y-pass to the summit of Snowdon. Quickly our view north toward Llanberis and the sea opened up and we paused several times to admire the scenery. It had rained the day before (and would rain heavily the next day) so we felt very lucky to have been spared a soaking. Better still, our view was relatively unimpeded; only the very top of the mountain was hidden by the clouds.

After about half a mile the trail reached a notch on the crest of the ridge and suddenly revealed a marvelous view to the south. Below us shimmered the lake known as Llyn Llydaw, lying in the bottom of a large bowl scooped out by

glaciation. The other side of this bowl consisted of quite dramatic cliffs forming the northern side of the ridge known as Y Lliwedd. At this saddle one can choose to continue directly up the spine of the ridge, a very challenging climb along the jagged rocks known as Crib Goch. We chose to continue up the easier trail that climbed gradually up the south side of the ridge. Above us we could occasionally catch sight of more intrepid climbers negotiating the rocky obstacles on the ridge. Below, others were hiking up the other trail, the Miner's Track that starts along the shore of Llyn Llydaw but then climbs to meet the Pyg Track that we were following. As we climbed the trail eventually graduated from the large glaciated bowl into a much smaller and steeper amphitheater containing the circular lake called Glaslyn. A ribbon waterfall hundreds of feet high fed the lake. At this point the trail became considerably steeper and rougher as it climbed the steep scree in one corner of this small amphitheater. Gradually we climbed into the cloud cover and the temperature fell quite dramatically. Then, quite suddenly, we reached the railway line at $53^{\circ}4.36'N$ $4^{\circ}4.78'W$ and an elevation of 3170ft and turned south to follow the railway for the last quarter mile to the summit. Here in the clouds, the temperature was below freezing and a thick frost covered all the rock surfaces. The frost had a quite unusual shape. The crystalline ice-stalagmites seemed formed by the combined effects of a temperature wavering below and above freezing, the continuous supply of moisture in the air and sculpturing by the wind. The crystals adorned the rocks and the rails and, with the mist, lent our surroundings a slightly surrealistic aura.

We paused briefly at the large, vertical lith marking the trail junction before walking the last few hundred yards along the railway to the summit. There, the station building was boarded up for the winter, but still served to provide some shelter from the freezing wind. About thirty feet above the station a substantial cairn marks the summit at $53^{\circ}4.11'N$ $4^{\circ}4.57'W$ and an elevation of 3560ft. We imposed on one of the many nearby hikers to take our photograph on top of the cairn. People were standing and waiting in the hope that a break in the clouds would allow a momentary view from the summit. One could detect that the top of the clouds were not far above us since hints of blue sky could be glimpsed. We also knew that the bottom of the clouds was not far below us. But we waited in vain for that break in the clouds.

It was too cold to lunch at the summit so we soon decided to begin our return journey. Retracing our steps down along the railway line we had no difficulty in locating the monolith marking the trail junction and so began the steep descent into the amphitheater of Glaslyn. Where the two parallel trails meet we left the Pyg Track and followed the Miner's Track down the scree slope to the shore of Glaslyn itself. Here the remains of a miner's barracks provides an attractive novelty. Perhaps the purist would see these ruins as an eyesore equal to the concrete pipeline. But to the average arbiter its age and the fact that it was constructed of native stone makes it quite unobjectionable. Terry and I ate our lunch seated on the stone steps of this antiquity. But we did not dally long for the day was ebbing. From Glaslyn the Miner's Track follows the shores of that lake and of the lower Llyn Llydaw. A broad track, it passes other ruined

buildings from the mining era including the remains of the ore-crushing mill of the Britannia Copper Mine. Near the end of Llyn Llydaw the trail crosses the lake by way of a causeway that was originally built so that copper could be more readily transported down the mountain. Finally we contoured along the ridge back to the Pen-y-pass car park.

As the late afternoon gloom settled over the mountains and people and sheep gathered themselves for the coming cold, we resigned ourselves for the long drive back to Oxford. The gloom seemed to summon silence and was bolstered by the thought that that was that. On Snowdon we had chatted as we almost always do when we are together. Yet I remember little of the subjects we covered. What I will remember is that sense of easy and enjoyable companionship that characterized all our times together. Mountains help bring those feelings into sharper focus. They provide perspective not only for the surrounding landscape but also for the landscape of our emotions, relationships and desires. But they do not make it any easier to put those feelings into words.

Chapter 8

LIFE AND DEATH IN BAILEY CANYON

*“The wind bloweth where it will,
and thou hearest the voice thereof,
but knowest not whence it cometh
and whither it goeth.”*

From the New Testament, John 3:8.

About two hundred yards north of our home in Sierra Madre, California, there is a rugged fissure in the San Gabriel mountains known as Bailey Canyon. This is a story about life and death in Bailey Canyon during a period of about five months in 1993-94.

The home in Sierra Madre in which we lived for many years was not much more than a stone's throw from the mouth of Bailey Canyon. As canyons go it is not very special, indeed it is a rather short canyon that does not penetrate much more than about half a mile into the San Gabriel foothills. But it is a steep and rugged place. After about a quarter of a mile the trail that follows the stream bed ends at a twenty foot trickle of a waterfall. Only those with a strong head for heights can climb around these falls. Even that effort only allows the hiker to penetrate another hundred yards or so before a much larger cliff bars the way of all but the experienced rock climber. Perhaps because of its inaccessibility to humans, the canyon has long been the home of a den of coyotes who would venture down into the city under cover of darkness. Doreen and I would sometimes hear their plaintive howls as we lay in bed at night and, occasionally, our dogs, Scrounge and Not, would become agitated when another coyote call would fill the night, namely the yelps that signaled a successful kill.

But, by and large, the coyotes coexisted fairly harmlessly with the citizens of Sierra Madre. As we were to discover, Bailey Canyon held much more lethal dangers.

Many years ago, during the great hiking era around the turn of the century, intrepid hikers constructed a trail that switchbacks up the east wall of Bailey Canyon to an elevation of about 2000ft, and then contours north to drop into a lovely little glade perched in a pocket high above the cliffs and waterfalls of the lower canyon. Here, water almost always runs in the stream bed, and has allowed a substantial grove of trees to flourish and fill the shadier depths of the pocket. Years ago, someone had so loved this spot that they had carried sufficient building materials up the steep trail to construct a small stone cabin. Now, only low stone walls remain to serve as a bench or table at this delightful picnic venue. Years before, I had discovered this glade and it became a frequent goal when I needed a short but vigorous hike within easy reach of home. Many times, Not and I followed the steep trail that the Boy Scouts of Sierra Madre have taken it upon themselves to maintain through the years. The brush had grown so thick after many years without fire that it required regular maintenance to prevent the trail from becoming completely overgrown. Several times the trail reaches the firebreak on the ridge bordering the canyon and Not and I would pause there to admire the view of the city below us. When time allowed, we would sometimes continue on up the trail above the leafy glade. This climbs to a saddle at about 3300ft just north of Jones Peak (3380ft) and one can then follow the firebreak on the ridge up to the point where it joins the Mount Wilson Toll Road. Alternatively, when feeling vigorous, we would climb down from the saddle into the much larger canyon to the west, called the Little Santa Anita. In doing so, we would follow a steep and rugged wash down to the Mount Wilson trail between First Water and Orchard Camp.

And so Bailey Canyon became a familiar and pleasant refuge for me, a place that I came to rely on for its gentle and bucolic solitude. And I think this was the case for many Sierra Madre residents. Since the trail does not appear on most hiking maps only local residents knew of its existence. And the charm of the place was supplemented by the old Mater Dolorosa monastery whose quiet buildings and grounds are adjacent to the entrance of the canyon, lending a special grace to the first hundred yards of the trail. It also made the trailhead difficult for a stranger to locate.

As soon as we awoke on the morning of October 27, 1993, it was clear that this was not going to be a normal day. A great cloud of smoke arose from the Altadena foothills to the west of us and had produced a plume drifting off to the southwest. The fact that fires might occur was not too surprising for the preceding few days had been crackling dry and hot, the last gasp of a very dry summer. The previous day a number of small fires had broken out in the foothills around the Los Angeles basin and it was clear that Oct. 27 was going to be worse. The local TV stations had turned to full time coverage of the various fires and seemed to report a new outbreak every hour or so. Reporters had a difficult time getting close to outbreaks like that in the foothills to the west of us and thus we did not really comprehend the severity of the blaze.

And so it was that I prepared to ride my bicycle to work that morning. My route takes me west-southwest and so I was soon encountering both the smoke from the Altadena fire and the hectic procession of people fleeing from it. Only then did I become aware of the seriousness of the fire. Later we learned that a homeless man who was spending the night on the slopes above Eaton canyon had started a fire to ward off the chill of the night. The fire had rapidly spread out of control and had gone roaring down and up the canyon feeding off the dense brush. It quickly reached Kinneloa Mesa above Eaton Canyon. Many expensive homes had been built on this mesa in the preceding years, and the fire leap-frogged from one expensive home to another in a seemingly haphazard fashion. The fire engine companies had responded quickly but the mesa had been developed without an adequate water supply and the firemen's hoses soon went dry. Then there was little they could do but establish a defensive line further down and organize the evacuation of people, pets, horses, vehicles and precious possessions.

It was the bottom end of this chaos through which I rode on my way to work. I also had to ride through the huge cloud of smoke downwind of the fire; this was also much greater than I expected when I set out from home. Nevertheless I reached work and began to attend to several urgent matters. The secretaries had set up a television in their office in order to follow events since many faculty and staff had homes not far from the fire. As the morning wore on it was clear that the fire was continuing to spread and had begun to move eastwards toward Sierra Madre. My alarm rose and Dana Young, one of our secretaries, was kind enough to give me a ride back home about midday. By then the fire had moved into Pasadena Glen and consumed a number of homes in that area. Doreen and I doubted that the conflagration would remain uncontrolled for much longer, but just in case, we began to load our most precious possessions into the car.

As the afternoon wore on the fire seemed to continue its inexorable progress eastward burning across the face of the mountains toward us. By late afternoon it was burning quite fiercely and had entered Hastings Canyon, the western neighbor of Bailey Canyon. We were now thoroughly alarmed. Our son, Patrick, had summoned a group of his friends who would help us evacuate if it became necessary, and we began to put more of our belongings into the panel van that one of them brought. I climbed on the roof of our house with a hose and thoroughly soaked the wooden shingles. Mind you, I was under no illusions that this would stop the fire should the wind come up and the fire come our way. But it might be effective in preventing airborne embers from igniting the roof under marginal circumstances.

We were extremely fortunate that the winds remained calm throughout the day and the fire moved relatively slowly. This allowed the authorities to summon fire tenders from many surrounding communities and to set up a line of defense along the northern boundary of Sierra Madre where the brush meets the houses. One of the critical moments came when the fire came roaring down from the ridge above the monastery. A heroic effort by the firemen stopped the blaze at this vertex, saving not only the monastery but all the houses in that vicinity.

By now the evening had come and the heat and light from the fire lent an

additional, hellish aspect to the event. It was now burning fiercely up the steep walls of Bailey Canyon and all we could do was watch and pray through the awesome intensity of the event. The fire did not burn evenly. It would die down for a few minutes giving momentary hope that the worst was over. Then, having ignited the brush at the bottom of a new slope, it would explode upwards in a firestorm vaporizing and igniting all before it as it swept up the mountain. These moments, in which the flames seemed hundreds of feet tall, were awesome and terrifying. It seemed as though the flame could easily roll over and engulf us. And yet, amidst the terror, I found time to reflect with sadness on the destruction of that lovely canyon that I had so treasured. Only the most fleet-footed of animals could have escaped; surely nothing could remain of the gentle glade perched high in the back of the canyon.

Moreover, there was also human chaos all around us. Most of the local residents were terrified and many had fled their homes. Everyone who lived in the blocks of houses north of us had been evacuated earlier by the authorities so now the police were paranoid about looting. Partly to prevent this, the streets around us had been sealed off along Sierra Madre Boulevard, the main east-west street to the south of us. Indeed our daughter, Kathy, had trouble getting through this cordon when she returned home in the early evening. And we had a bizarre moment during the night, when some neighbor, spotting the large group of young people assembled on our front lawn (Patrick's army), got the erroneous impression that they were looters and called the police. Sierra Madre's finest arrived in force with their guns drawn and demanded that the boys lie face down on the driveway. Fortunately, I was nearby and managed to intervene before the situation became too bizarre. But the police were rightly nervous for a huge number of tourists had arrived in Sierra Madre to see the event. These inquisitive onlookers had to park south of Sierra Madre Boulevard, but came streaming up our lane on foot throughout the night, trying to get a closer look at Armageddon. I stopped many of them but they kept coming.

Eventually, imperceptively to begin with, the danger began to ebb. About 3.00am almost all the fuel in Bailey Canyon was spent and the fire had moved to the east of us where the slopes were not so steep and where the firemen had cut a number of firebreaks. We feared for a time that it would burn down into Little Santa Anita Canyon. This would have been a real catastrophe for the Little Santa Anita contains many closely packed homes that could not have been saved. But it never reached that point and, as the sun began to rise, it was clear that the danger had passed. Indeed we even managed to get a few hours of fitful sleep before our internal clocks demanded that we awake.

And so the most feared natural hazard of the mountains had come and gone. Many, many homes were lost throughout the Los Angeles basin, particularly in Altadena, Malibu and Laguna Beach. But neither lives nor homes were lost in Sierra Madre thanks to the valiant efforts of the firemen and an abundant reservoir of water. It took many days to recover from this experience; it was much more terrifying than any earthquake, flood or storm we have ever experienced.

A couple of weeks after the fire, I summoned the resolve to find out just how bad the damage was to Bailey Canyon. I hiked toward the canyon from the

small wooded area next to the car park, and, as soon as I passed the monastery, I came upon the distinct edge of the fire. Almost everything on the other side of this line had been completely incinerated. It was truly like a moonscape. Only the blackened skeletons of the bigger branches of the largest bushes remained. There was not a single living thing left. And as I ascended the trail up the east wall something else became apparent. The fire had baked the ground so that the sand and soil was no longer held together by its usual, natural grime. Consequently, small sandy landslides were everywhere. This sand had accumulated in many of the larger gullies so that one could, with impunity, slide or ski down these gullies which, in normal times, would have been filled with rough rocks and tearing brush.

I continued up the trail with little hope that my glade would contain anything other than larger skeletons. But, when I rounded the corner before the trail drops into the pocket, I was delighted to find that the glade itself was almost untouched. The fire had completely burned the brush on all the surrounding slopes but had been stopped by the greener foliage of the glade. My refuge was now an oasis and I sat down to enjoy its gentleness.

I revisited the canyon several times in the weeks that followed. On one occasion I took advantage of the absent brush to climb the precipitous west ridge of the canyon to a point above the glade. I then “skied” down a large, sand-filled gully into the glade and returned home by the regular trail. Light rain had fallen on several occasions during these weeks and a few blades of grass had begun to appear in sheltered places where the grass seed had not been blown away. The ash was clearly a significant fertilizer. But it seemed that it would take forever for any substantial foliage to return.

It was clear that, if and when heavier rain arrived, the canyon was primed for more disaster. Any substantial volume of rain would fluidize the sand-filled gullies and major mudslides would result. But, for four months, we were spared such additional trauma. Then on Saturday, March 5, 1994, a large storm swept in from the Pacific and the rain came down in torrents. By Sunday, March 6, the rain had abated and a number of local people took their usual Sunday hike into Bailey Canyon. John Henderson, a 33-year-old Sierra Madre resident, loved both the mountains and his 9-year-old son Matthew. As they frequently did, John and Matthew hiked up the stream bed of the canyon. They passed a number of other, less adventurous hikers who decided not to venture too far in case the rains returned. One of these careful hikers described what happened next as incredible. It began with a roaring, grinding sound as though an express train was coming crashing down the canyon. As the volume of sound increased the hikers all scrambled for higher ground and only just in time, for a wall of water, sand and rocks came tearing down the canyon carrying all before it and forever altering the topology of the canyon bottom. It was some time before the hikers could venture down the trail, inspecting as they went the great gash left in the canyon bottom by the passing of the flash flood. Some had already figured out what had happened. Early rains had created a large mud and rock slide in one of the larger gullies and, where this had come to rest in the bottom of the canyon, it had dammed the flow of the main stream. Behind this dam

the water had built up until, at the critical moment, the natural dam had failed creating the flash flood whose awesome power the hikers had witnessed. The flood had come to rest behind the flood control dam that had been built just below the entrance to the canyon for just such an event. Those unfamiliar with the southland may be unaware that most canyons have such a catch basin or flood control dam to limit the consequences of the periodic rainstorms that roll in from the Pacific.

It looked as though Sierra Madre had been spared again for everyone seemed to be present and accounted for. After conferring with the police, who had been called to the scene, the hikers returned to the car park just below the flood control dam, and began to leave for home. Only when a few vehicles were left, did it become apparent that a small car was standing there unattended. Out of curiosity, the police ran the license number through the computer and discovered that the owner was John Henderson, a Sierra Madre resident. A telephone call to Henderson's home uncovered the ominous fact that John and his son Matthew had gone hiking in Bailey Canyon that afternoon. Further questioning of the hikers now revealed that a man and a boy had been seen hiking up into the canyon. Charles Corp, former mayor and an avid hiker for over 45 years, recalled that he had spoken with the Hendersons just moments before the wall of mud came roaring down the canyon. He told the local newspaper: "I was going up the east side and had crossed the stream which was a teacup full of water. That was about 4.30pm Sunday afternoon. I could hear the roar like a distant jet plane. The man and his son came up and asked what the noise was and I told them that it had to be water. We were close to the stream when the roar increased. Then a 10 to 15ft stream of boiling mud, sludge, logs, boulders came down." Asked how close he was to the stream he laughed ruefully and replied, "About 15ft and seconds later I was 35ft away. It was absolutely unprecedented. I never saw anything like it before." Another eye-witness, Rick Chartraw, who was evidently closer to the mouth of the canyon, told his story. "At first it was like a heavy rain. Then it was just too loud for rain. I was walking my dogs and went over a temporary bridge. Then the ground started to shake and water turned the corner about 150yds away from us. It hit the banks on the east side of the wash and exploded... If you had been in the wash and started to move away, you wouldn't have made it." The Sierra Madre Mountain Rescue team was called in but their search of the canyon produced nothing. Darkness fell ominously and with looming tragedy in Bailey Canyon.

With the coming of dawn, the preponderance of the evidence suggested that John and Matthew had been overwhelmed by the flood and swept to their deaths in the canyon bottom. It seemed likely that their bodies were buried under the hundreds of tons of mud and rock caught in the debris basin. Other members of the family began a brutal vigil atop the dam. Foremost among this group was John's sister, Laura Henderson, who had acted as a surrogate mother for Matthew ever since his natural mother had abandoned the family when Matthew was just an infant. Personnel from the Los Angeles County Flood Control Department were called in. Every two or three years they are responsible for cleaning the accumulated sand and rock out of the debris dams.

After a search of the surface of the material in the Bailey Canyon debris basin produced nothing, the authorities recognized that they would have to begin systematic excavation. And so a very grim task began, attended throughout by members of the Henderson family who viewed the work from atop the dam. Lines of trucks arrived, filing in individually to be loaded with sand, rock and mud from the basin. The drivers set up different routes for the arriving and departing trucks to minimize the chance of a traffic jam. And the trucks began to roll night and day. From our home we could hear the regular noise from the passing trucks as they drove north on Grove Street and south on Lima Street. It was a gruesome and tragic death rattle. And it went on all through the day and night.

We assumed that it would be only a day or so before the bodies would be discovered. But we underestimated the magnitude of the event. Days passed and still the trucks ground up and down the neighborhood streets with no result. The trucks kept us awake at times but how could we complain when we thought of the tragic figures of the Hendersons sticking by their vigil on top of the dam. After four or five days, some very selfish residents did complain and the city decided that, since the matter could not be considered urgent, they would not continue the night work. Eventually, on March 15, nine days after the flash flood, the body of John Henderson was found on the southwest side of the debris basin. One hoped very much that the ordeal of the Henderson family was nearly over. But it was almost another week before the body of Matthew Henderson was found on the morning of Monday, March 21, ironically in the northwest corner, opposite where his father had been buried. Finally, the trucks were silent, Laura Henderson could climb down from the dam and some semblance of proper mourning could begin.

It was more than two weeks before I could bring myself to return to Bailey Canyon. But on April 10, a beautiful and breezy spring day, I decided that it was time for a symbolic pilgrimage and Not and I made our way to that familiar trailhead. As we walked passed the debris basin, no sign remained of the human tragedy that had taken place there only a short time before. There was an unnatural regularity to the geometry of the excavated debris basin but little else. No flowers marked the temporary graves of John and Matthew Henderson.

We hiked on, into the canyon. The bottom had been scraped clean by the passing flood and, in places, one could see that the mud flow had been about 10ft deep. Above that level, however, there was little sign of the catastrophic event. We turned east and began to follow the trail up the east wall. And there the most amazing sight revealed itself. Where there had been nothing but baked earth just a couple of months before there were now carpets of beautiful flowers on beds of the greenest grass. And the flowers were everywhere. Bright orange, yellow and white, several shades of blue and violet, they shone in the California sun and danced in the spring breeze. They brought tears to my eyes. I was certain that, if there had to be one, John and Matthew could not have wished for a more eloquent memorial. As they had done so often before, the mountains had reminded me of my own brief space. That life and death and rebirth are the natural order of things and that we should be grateful for the

marvelous and terrible beauty that cycle creates.

Chapter 9

MOUNT LASSEN

“May your trails be crooked, winding, dangerous, leading to the most amazing view. May your mountains rise into and above the clouds.”

From “Earth Apples: The Poetry of Edward Abbey” by Edward Abbey (1994).

She crept up the steep trail behind me, not daring to look down the huge drop-off just feet away but staring at my boots and mimicking their steps. This was a foreign and frightening place, this barren, rock-strewn side of the great volcano, a place she could not imagine venturing to in the normal course of life.

Mount Lassen is a beautiful snow-covered volcano in northern California, part of the southern Cascade Range and not far north of the Sierra Nevada. Along this sector of the “Ring of Fire” as the tectonic edge of the Pacific basin is known, volcanoes are born, live and die in the monstrous battles between the plates of the Earth’s crust. Thus the Pacific coast is lined with a march-step procession of these fiery giants from Lassen to Shasta, from Crater Lake to Hood, from St. Helens to Mount Rainier and so on all the way to Alaska. Remnants of ancient volcanoes such as Mount Tehama also abound, though that volcano is long gone, having collapsed as Crater Lake has done and St. Helens may be doing. About 10,000 years ago Mount Lassen began its rise from the ashes of Mount Tehama, eruption after eruption sending silica-rich lava called dacite tumbling down from the summit craters and adding to the great talus slopes. After a period of quiet, Lassen Peak suddenly erupted again on May 30, 1914, with steam explosions continuing through the next year. Then on May 19, 1915, lava welled up in the summit crater and spilled down 1000ft of the western slope. More dramatically, lava also poured down the eastern flank where it melted the winter snow pack. The result was a catastrophic mud flow that accelerated down the steep mountainside, leaving a mile-wide path of destruction whose scar, called the Devastated Area, can still be seen today. But, more was to come. Three days later, a violent explosion threw ash 30,000ft

into the air and propelled huge rocks miles from the mountain. Minor eruptions continued until 1921 and fumaroles spewed steam into the summit crater as late as the 1940s.

Now, in the late 1900s, it lay peaceful, the jewel in one of California's lesser known parks, Lassen Volcanic National Park. The lower slopes are gloriously pine-forested with many lovely glades, meadows and lakes that present endless serene vistas for the summer traveler. A scenic road snakes up the side of the volcano, eventually climbing through the tree line. There the landscape suddenly changes to steep slopes of barren lava fragments interspersed with great fields of snow. At the road's highest point beside the frigid Lake Helen there is a parking area (elevation 9222ft) for the trail that leads to the summit.

Doreen and I had passed this way once before in July of 1970. We had driven this scenic road with our two young daughters and played in the snow beside the trailhead. I had looked up at the tiny figures high above our vantage point, climbers ever so slowly making their way to the summit. Though I wanted to follow them it was not possible to do so then.

Two years later, we embarked on another of our epic camping trips, this time venturing further north and visiting several more sites along volcano alley, among them Crater Lake and Mount Hood. We also spent several lovely days in Mount Rainier National Park, another beautiful forest setting in the shadow of a giant volcano, in that case the awesome, 14410ft Mount Rainier. Our campsite in Longmire near the west entrance to the park was in deep cedar forest and, despite the nightly visits of the black bears, provided a pleasant sojourn. As usual in the evening at a campground, we made our way along to the campfire program. It was there that I first learned of the possibility of climbing Mount Rainier with the guided help of a park-supervised program called Rainier Mountaineering Inc. Much more significantly, Doreen also listened to this possibility. Sitting around our own fire after the kids had been put to bed, she startled me by commenting that she would like to climb Rainier. Of course, she knew it was not possible at that moment but she was nevertheless serious and I did her a grave disservice by laughing at the proposal. It was a moment and a reaction that I deeply regretted in the days and years that followed. There was no doubt that she was physically capable, but she had never been an athletic or outdoors person and so this professed ambition seemed out of character. But everyone should be permitted dreams without the scorn I used that evening. Moreover, Doreen had spent a half a lifetime and much of her youth supporting my dreams and ambitions. It was time I started to allow her the freedom and space she had given me.

In later years as I reflected on that moment, it rightly became a turning point in our relationship though I certainly did not recognize it in the immediate aftermath. We both continued to be entirely engrossed in building our future and nurturing our family, neither of us having quite enough time for each other. Occasionally, Doreen would make reference to her desire to climb Rainier. Recognizing the unfairness of my initial reaction, I would express my willingness to help her achieve that goal. But little came of it.

As the years rolled by, I myself became increasingly interested in hiking



Left: Mount Lassen. Right: Lassen from trailhead.



Left: View from summit trail. Right: At the summit crater.

and mountaineering. One obvious and natural ambition was Mount Rainier. I researched the climb and learned of its difficulties and dangers. Mount Rainier is quite unlike Mount Lassen, its gleaming mantle of ice being composed of more glaciers than any other mountain in the United States outside of Alaska. Even by the easiest route, the summit climb is a very strenuous two-day adventure requiring experience with ropes, crampons and ice-axes. After a one-day basic climbing school, participants in the organized climb start at the high-point of the road at Paradise (elevation 5420ft) and climb over trails and permanent ice fields to the mountaineering hut at Camp Muir (elevation 10,000ft). Overnighiting there, you set out before dawn for the 14,410ft summit, traveling roped up over glaciers, wielding crampons and ice-axes. Among other attractions, the summit features huge ice caves created by the volcanic heat below the icecap. It is a spectacular arctic island in the sky. I wrote for application forms to the Rainier Mountaineering Inc.

I never pursued it further. Not because it was beyond my capabilities; indeed I climbed more difficult peaks like the Grand Teton and made a serious attempt on Switzerland's Matterhorn. But Mount Rainier was in some sense Doreen's dream, however unrealistic, and I had no right to tread upon it. Then, in June

1994, there came a chance to make some restitution, to find some resolution. Doreen and I had driven to Lake Tahoe to attend a conference. Afterwards, we took a few days to ourselves and made our way north to Lassen National Park which we had not visited for more than 20 years. We stayed in a little motel in Chester and made several day trips into the park. On one of those days we drove up to the summit trailhead beside Lake Helen, resolved to climb a short way toward the summit. The trail starts easily, but as you gain elevation, the slopes steepen and the exposure becomes intimidating. Compounding the difficulty, the wind rose making it difficult to maintain balance on the narrow trail. I assured Doreen we would turn around whenever she wanted. But on we climbed passing the white bark pine growing horizontally across the volcanic boulders. She asked to hike behind me, holding on to my backpack to steady her in the wind. The landscape continued to open up below us, spectacular vistas of rock and snow, of forest, lakes and distant mountains including Mount Shasta. Doreen avoided looking at the exposure by concentrating on my boots. We slowed in the thin air, breathing hard to get enough oxygen into our lungs. But on we climbed. I am not sure I knew what she was thinking but I did not need to in order to marvel at her courage and her determination. Then, quite suddenly about 2.2 miles from the trailhead and 1200ft higher, the trail gradient eased and we surmounted a rise to find ourselves there, on the cragged, 10457ft summit of Mount Lassen. We had made it and we could enjoy the spectacular vistas without the intimidating exposure. Doreen sat down beside the snow-filled crater to get her breath and recover her composure. I sat down beside her. Not much was said; I had said too much all those years ago. We asked another mountaineer to take our picture together and the smiles tell of the satisfaction of that moment. But, it was too cold to linger and we soon started down again.

I won't pretend to know whether she felt some resolution but I hoped that was the case. Back at the trailhead we drove south to the park restaurant and tourist shop near the southern entrance where we enjoyed a leisurely meal and a celebration drink. We then strolled through the shop. Stopping at the tee-shirts, she picked out one with "I climbed the volcano" emblazoned across the chest. She smiled at me as she paid for it. She is a beautiful, spectacular woman.

Chapter 10

MT. FUJI IS CLOSED

“Any man can lose his hat in a fairy-wind”

Popular Irish proverb.

Most hikers have an unwritten list of mountains that they would like to climb. Mount Fuji is on many of those lists because of the hallowed place it occupies in the Japanese culture and mythology. The Japanese regard the symmetry of its nearly perfect conical shape as implying a sacred origin and the number of paintings, view points and photographs that celebrate Fuji are numberless. Yet this same monotonous symmetry makes the hike up Mount Fuji somewhat boring. The Japanese have a saying that everyone should climb Fuji once but only a fool would climb it twice. What makes the hike even less enjoyable is that, for the few summer months when the snow is gone, there is an almost unbroken queue of people trudging up to the summit.

Despite all this, when I went to Japan for a couple of months in the spring of 1993, one of my private objectives was to get to the top of Fuji-san. When I mentioned this plan in a letter to my principal host, Professor Akira Shima of Tohoku University, he replied that this would not be possible because *“Mt. Fuji is closed”*. It seems that the Japanese, who love rules and usually obey them without question, had long ago established “a season” for climbing Fuji that begins on July 1. I, being singularly unimpressed by arbitrary rules, still thought I might be able to sneak away some weekend and attempt the climb. It seems, however, that my reputation had preceded me for it became clear that Shima and my other hosts had arranged a schedule that did not have the two successive free days that would be necessary for the attempt. And so my ambitions were thwarted. Of course, it must also be added that during the month of April when I would be within striking distance of the mountain, the depth of snow and the severity of the weather make it foolish for anyone to attempt the climb and particularly foolhardy to try to do it alone. Nevertheless, I felt some sense of frustration especially since I had come well-equipped for the

snow. Early the previous winter I had purchased crampons (spiked frames you strap to your boots) and had practiced snow climbing with them on the slopes of Mount Baldy in California.

During the first month and a half of my stay in Japan I did have the opportunity to climb a number of mountains in central and southern Japan. Almost always some fellow academic accompanied me. Thus I climbed To-no-dake (4892ft) in Tanzawa Quasi-National Park with my friend, Yoichiro Matsumoto, of Tokyo University. With another friend, Yoshi Tsujimoto of Osaka University, I climbed two very interesting and very different mountains. One day during “Golden Week” we drove to the village of Dorogawa in the wilderness area south of Osaka and climbed the sacred mountain of Sanjo-go-take (5640ft) also commonly known as Omine-san (see “Ominesan”). Later, during a visit to the beautiful island of Yakushima south of Kyushu, we negotiated our way past a large group of Japanese macaques and through fantastic semi-tropical forest and meadows with crystal streams on our way to the magnificent 6007ft summit known as Kuromi-dake. These climbs were very enjoyable and interesting but not exceptionally challenging. I still harbored a desire to climb a really challenging mountain, to escape from my chaperones and, perhaps, to demonstrate that I could have climbed Fuji anyway if I had been given a chance. Call it Irish stubbornness.

Then, in late May, I traveled to the relatively remote northern island of Hokkaido. Because of the severity of the winters this island was only settled about 150 years ago by the Japanese or “Yamoto” who displaced the native inhabitants known as the Ainu. The island is still sparsely populated and that population is almost entirely confined to the flat valleys between the snow-covered mountain ranges. Consequently the government has been able to set aside large sections of the most beautiful mountains as National Parks. Moreover, the people of Hokkaido, descendants of frontiersmen, have a better developed sense of personal liberties. As a result I was allowed to travel to the outback on my own to visit the largest national park in Japan, the rugged wilderness known as Daisetsu-zan National Park. Specifically, I traveled first by train and then by bus to a small mountain village called Sounkyo that lies in a deep gorge in Daisetsuzan National Park. High above the rim of the gorge is a range of towering, snow-covered peaks and the most dramatic of these is the spectacular 6509ft peak known as Kurodake or “the black peak”. The name was clearly motivated by the basalt cliffs that surround three sides of the summit and stand out in stark contrast to the snow-field on the fourth side. In its shape, Kurodake is often likened to the Matterhorn though, in all honesty, it is much less steep than that fabled alpine landmark. Kurodake and the other peaks of this range are inaccessible except for a brief period in the late summer when the snow dwindles to patches. Then, when most of the snow has melted, Kurodake is easy to climb. But in late May it is very clear that to all intents and purposes “Mt. Kurodake is closed”.

However, no one was there to stop me. Moreover, in an effort to draw tourists to this remote place, the local authorities had very recently constructed a cable car that climbs from Sounkyo up to the rim of the gorge and provides



Left: Kurodake. Right: Sounkyo from above.

a substantial start in climbing Kurodake. So early in the morning, I took the first cable car to the top station and sneaked off onto the surrounding snow field. No one kept any special watch for no one would dream of doing such a thing since “*Mt. Kurodake was closed*”. After about a quarter of a mile I was out of sight of the top station and turned toward the mountain. The first hour and a half of the climb was fairly straightforward. My crampons made climbing in the snow quite easy and I made steady progress up the snow field that led toward the summit. But toward the end of the second hour, the slope began to get quite steep. I progressed by digging in the toe spikes of my crampons and using my gloved hands to maintain my stance. Only occasionally did I encounter snow into which I sank to my waist. But as I neared the summit, the snow began to get very deep and the mist began to thicken. I began to fear an inadvertent encounter with the edge of the black cliffs. Eventually, despite my stubbornness, I had to conclude that it was too dangerous to continue. Though I felt that the summit might be only a few yards further, it would have been extremely foolhardy to continue. And so I turned around.

It was only then that I realized the true precariousness of my position. Climbing a steep, snow-covered slope is one matter. Trying to descend is an entirely different matter. It was much more difficult to secure a firm foothold when descending than when ascending. I barely inched my way down the slope. There were several moments when only the slimmest margin separated me from a life-threatening slide down the mountain. It took many minutes to recover my nerve after those moments. I would breathe very deeply to regain my composure and then take another small step. It also occurred to me that I definitely did not want to die on that mountain and that I very much wanted to see my wife and children again. Eventually, I made it to the lower slopes where I could have confidence in my ability to stop any slide. Then I made rapid progress walking down the snow field, retracing my steps in the snow. The hours of daylight were rapidly dwindling as I sneaked back into the cable car station. I half-expected an official “unwelcoming” reception party. But no one seemed to have noted my long absence and I caught the last descending cable car to the base station.

An odd sort of euphoria came over me once I reached the safety of the cable car. Perhaps it was the oft-described, heightened appreciation of life that seems to follow any brush with death. Perhaps the accumulated adrenalin provides a

natural narcotic. I know I thought especially of Doreen and my children. And, for the moment, I lost that sense of purpose that usually governs my travels. At the base station, I lingered somewhat aimlessly amid the souvenir stands. It occurred to me that I had bought very little for my wife and children. Yet, like most souvenir stands, there was little here that was worth buying and I would normally have passed straight on. But, for reasons I still do not fully understand, my attention was transfixed by one particular object, a bright pink baseball cap proclaiming "Hokkaido". Acting on impulse, I bought this garish hat, imagining that I would give it to my eldest daughter. Perhaps it was that the cap reflected the fluorescence of my life at that moment.

So I still had not overcome the kind of challenge I had sought. I had failed to climb Mt. Kurodake; I had discovered that indeed "*Mt. Kurodake was closed*". Yet I now understood why I felt such resentment when I heard that phrase. Mountains are wild and free and dangerous and beautiful. They are never conquered; one merely trespasses upon them for a brief moment in time. For anyone to arbitrarily declare that a mountain is closed seemed an insult to that spirit and to its reflection in my soul. I felt some measure of satisfaction that I was stopped by my own frailty and not by some arbitrary rule. Some measure of joy for having experienced the wild beauty of that mountain at that particular moment in time. And some measure of pride that the moment was mine alone.

Moreover, I was to find out just how close I did, in fact, come to conquering Kurodake. I stayed the night in Sounkyo and the next morning dawned bright and beautiful, sunny and clear. I had a couple of hours before my bus left and so I decided to ride the cable car again in order to take some photographs of Kurodake from that vantage point. I was rewarded with a magnificent view from the observation deck on the roof of the top station. Kurodake and the other neighboring peaks rose majestically above me, shining in the morning sun. The observation deck was also equipped with the standard telescopes one often finds in such locations and so I idly focussed one of these on the summit of Kurodake. And there, clear as day, were my tracks in the snow in the otherwise pristine snow field. They led directly up toward the summit and came to a halt only a few yards from the peak. Though I did not know it at the time, a small effort would have placed me at the top. There were no other tracks in the snow near the summit. Clearly I had been the first person to attempt to climb Kurodake that year.

I knew that one day I would return to Japan during late July or August. I would catch the bus from Tokyo to the Fifth Station more than half-way up Fuji and I would follow hundreds of others as they make their way up the well-worn trail to the summit of that symbolic mountain. Maybe, like many others, I would climb in the dark in order to enjoy the beauty of the sunrise. No doubt I would experience some sense of accomplishment. But it would not come close to the raw power of my experience on Kurodake and my elation at seeing my footprints reach toward the summit of that mountain. Perhaps I am crazy.

Chapter 11

MOUNT WILSON TRAIL

“Mountains, like men, have their history. They too are born, grow decay and die. One cannot claim that, like men, they love, but it is true - and how true - that they are loved.”

From “No Picnic on Mount Kenya” by Felice Benuzzi (1953).

Before the white men invaded their lands, Gabrieleno Indians enjoyed the warm, dry climate of Southern California and the acorns and berries that grew in abundance in the canyons of the San Gabriel mountains. In winter they would come down out of the foothills to fish and hunt on the plains of the Los Angeles basin. But when spring came and the heat began to rise they would retreat to enjoy the fruits and coolness in the depths of the canyons. Untold centuries of habit had established Indian trails that led into these canyons and even over the mountains to the desert beyond. One such trail entered the foothills just north of the modern-day community of Sierra Madre and followed a canyon we now know as “Little Santa Anita Canyon”. It eventually wound its way to the highest point in the local range, a mountain now known as Mount Wilson. Like many Indian trails this path was less than a foot wide and, in places, exceedingly steep and dangerous. But, it allowed access to one of the most beautiful wooded glens in the whole range, an idyllic glade at the head of Little Santa Anita Canyon. There, for many, many centuries, the foothills witnessed the same cycle of life. And, some years before the Spanish explorers passed in their ships, a small acorn took root in the fertile soil of the canyon bottom and began a 500 year odyssey, leading to the magnificent oak tree that now presides over the spot we now know as “Orchard Camp”.

In 1841, early in the days of the pioneers, Benjamin Davis Wilson, a fur-trapper born in Tennessee in 1811, came west to California. He claimed that he was on his way to China, though it seems unlikely that there was much future for a fur-trapper in China. Arriving in the Los Angeles area he decided to stay and bought land near Riverside with the intent of trying his hand at cattle

ranching. In 1844, his fortunes seemed to take a major step forward when he married Ramona Yorba, the daughter of a prominent and influential Spanish-American family. Two years later, however, came the Mexican war that pitted the largely Anglo-American Northern Californians against the predominantly Mexican-American Southerners. Wilson sided with his fellow Anglo-Americans and spent most of the war in jail in the south. With the victory of the northerners, Wilson's fortunes changed again and he entered both business and politics in the still small pueblo of Los Angeles. At that time, the population was about 500. One measure of Wilson's revived fortunes was his election as mayor in 1851.

Wilson's political and business successes allowed him to purchase his own ranch and, in 1854, he bought the 128-acre Rancho La Huerta de Cuati at the top of the San Gabriel Valley in the lee of the San Gabriel mountains. That ranch represented the nucleus of a larger dominion that "Don Benito" (as he became known to the largely Spanish population) accumulated in the years that followed. His hacienda came to include large parts of the present cities of San Marino, Pasadena and Sierra Madre.

A shortage of timber in the desert-like surroundings of the valley prompted Wilson to glance up with increasing frequency at the wooded peaks of the mountains towering over his lands. In 1864, he sent his Mexican and Indian ranch hands to explore and improve the old Indian trail that began in Sierra Madre and led up the Little Santa Anita to Mount Wilson. Wilson recognized that this trail could give him access to the stands of pine and spruce that covered the higher slopes, and he decided to widen and improve the trail in order to harvest the timber. But, the slopes of the geologically young San Gabriels are steep and rugged and progress on the trail was painstakingly slow. By April, the work crew had reached a point near the head of the canyon where there was a particularly beautiful, wooded glen dominated by a magnificent oak. Since this glen was almost exactly halfway to the summit, Wilson decided that it was a strategic spot at which to build a "Halfway House". A wooden shack was constructed in the shade of the great oak. Eventually, the way station also included stables and a blacksmith's forge for the horses.

Impatient to see what lay beyond his Halfway House, Don Benito and his children's tutor, William McKee, decided one April day to press on to the summit without the benefit of a trail. Loading their horses with food and camping gear, they scrambled up the steep slopes and through the dense brush at the head of Little Santa Anita Canyon. Eventually they reached the saddle between Mount Harvard and Mount Wilson and made their way, just before sunset, to the summit of Mount Wilson. There, amidst the stands of pine and spruce, they could look out over a magnificent panorama. The valley below was dotted with ranches. The pueblo of Los Angeles may have been visible in the distance, and they could certainly make out the ocean with the profile of the mountains of Catalina on the horizon.

The remains of two log cabins on the summit provided mute testimony to previous, unknown adventurers. The tracks of a bear testified to a more dangerous visitor. In those days, California grizzly bears were common in the San

Gabriels. The grizzly is now extinct and the brown bears that roam the mountains these days are a recent import. The group were relieved to find a spring of fresh water a few yards west of the summit and settled down to spend the night there.

Late in the summer of 1864, the trail was completed. Wilson built a cabin and other facilities on the summit and his men began to harvest the timber. However, after a few weeks, it became clear that the project was not very practical and Wilson abandoned the enterprise. Nevertheless, his name was now permanently associated with the mountain and the trail he built became one of his most enduring legacies. Indeed, for many decades it remained the only access to the top of Mount Wilson.

A few years after Wilson abandoned his timber business and his "Halfway House", the latter was homesteaded by George Islip, who planted a small orchard of apple, pear, cherry and plum trees on a narrow bench near the house. The trees soon bore fruit and an increasing number of hunters, fishermen and even hikers began to enjoy this natural rest stop in the shade of the huge oak tree. At this time, it acquired its modern name, Orchard Camp. Islip was later joined by another mountain man, George Aiken, and they supplemented their income by keeping bees and making wooden singles both of which they transported to the valley below. For reasons that are unclear, Islip and Aiken abandoned Orchard Camp prior to 1880 and, for about a decade, it lay derelict though a favorite camping spot for hikers, horsemen and hunters.

As the population in the valley grew, the recesses of the canyons became a favorite weekend retreat. It was the dawn of the great hiking era. In the middle of the 1880s as many as 70 people might spend the night at Orchard Camp, the ladies in the old wooden shelter while the men braved the open ground. Mount Wilson remained a favorite weekend destination and it became customary for hiking parties to build a large fire to signal their arrival at the summit to family and friends waiting in the valley below. With this rapid increase in the use of the trail, there was clearly a place for a way station to serve the needs of visitors. Capt. Fred Staples, an old "fortyniner", had homesteaded Halfway House sometime before 1889 and, a few years later, sold the property to A.G. Strain. Strain leased it out to a series of individuals who operated it as a way station and weekend resort. The first of these proprietors was James McNally who turned the cabin into a refreshment stand and built cabins and tent houses nearby. To improve access to this increasingly popular resort, burros could be rented from the Mount Wilson Stables in Sierra Madre. In 1912, McNally sold his interest in the resort to Foster W. Huston who enlarged and improved the facilities, adding a dance hall and a croquet court as well as more accommodations.

For more than fifty years, Orchard Camp served the needs of all who passed that way. It became one of the most popular retreats in all of the San Gabriels. And when the interurban railway of the Pacific Electric Company brought the "Big Red Cars" to Sierra Madre in 1906, crowds of hikers would arrive early on Saturday morning bound for the local canyons. Come Sunday evening the reverse migration would occur. At its peak in the year 1911, over 40,000 people

signed the register at Orchard Camp.

The hiking era came to a close soon after the automobile began to dominate people's lives. Roads were driven into the San Gabriels and few people ventured more than a few hundred yards from their automobiles. Orchard Camp was abandoned in 1940 and the remains of the buildings were demolished by the Forest Service shortly thereafter. But the great oak tree remained and, today, that beautiful glen has reverted almost completely to its natural state. The number of visitors is probably a few percent of the number who came in 1911. For me it is a special place and I am glad of that silence.

Other weekend cabins and way stations were constructed in Little Santa Anita Canyon. Halfway between Sierra Madre and Orchard Camp, the trail first encounters the stream at a point that is now called First Water. It is a pretty place with shady trees and a stream that forms a series of small swimming pools, connected by waterfalls. It rapidly became a favorite picnic spot. There, in 1888, Emil Deutsch built a cabin for his family and gave it the logical name, Quarterway House. Later, this cabin was leased to George Damon, the Dean of Engineering at Throop Polytechnic Institute (that later became the California Institute of Technology) during the period 1911-1917. Several other cabins were built nearby. Nothing remains of these structures but First Water still serves as a welcome rest stop after the tough climb up the wall of the lower canyon.

In its early days, the Mount Wilson Trail also witnessed a number of other important events. The burgeoning interest in science during the second half of the 19th century gave rise, in the 1880s, to major developments in the field of astronomy. Scientists began to seek out high mountain-top locations around the world where clear air and good weather would allow the sharpest view of the heavens. It occurred to some of the local leaders that Mount Wilson might be an ideal site for star gazing and that an observatory on that peak might bring both prestige and business to the region. Consequently, they set out to attract a reputable astronomer to lead such an enterprise. Eventually, they persuaded the director of the Harvard University Observatory, Professor Edward Pickering, of the merits of the idea and the director dispatched his brother, William, to the west coast along with a small, 13-inch telescope, that would serve as a test experiment.

Prominent among the local boosters of the Observatory scheme was Judge Eaton, a resident of Pasadena, who offered to arrange to transport the telescope up the trail to Mount Wilson. The telescope would be dismantled for the journey. However, when it finally arrived in Sierra Madre on February 20, 1889, the Judge was crestfallen to discover that, instead of the anticipated weight of 1600 pounds, the telescope was found to weigh 3700 pounds! Nevertheless the Judge set to work immediately. The trail was improved and widened in places. The parts of the telescope were loaded on a specially constructed dolly, and a team of six men and two horses began the slow process of transport to the summit. In some places the two horses pulled the dolly; more frequently the dolly had to be winched forward with the help of a block and tackle. Progress was painfully slow. Though the event was not recorded, one can imagine the day when the team paused in the shade of the great oak, girding themselves for the second half

of the journey. Progress continued without major incident until they reached a point about two miles from the summit. There, a late winter storm suddenly arrived and dropped about two feet of snow. The team had no alternative but to abandoned their cargo to the elements and beat a hasty retreat to the shelter of Orchard Camp. However, within a few days they were able to resume their task and, on April 3, 1889, Judge Eaton lit a large fire on the summit to signal the success of the venture. The journey had taken more than thirty days to complete.

Though Harvard University removed the 13-inch telescope just a few years later, the instrument had clearly demonstrated the value of the site for an observatory. Though a hesitant start, the experiment did represent the beginning of a glorious history for Mount Wilson in the annals of astronomy research. Later, a number of ground breaking telescopes including the Snow solar telescope, the 60-inch reflecting telescope and the spectacular 100-inch Hooker reflecting telescope placed the Mount Wilson Observatory in the international forefront of astronomy research. It is said that during more than 50 years of operation, the 100-inch telescope contributed more to man's knowledge of the universe than any other single instrument. For 31 years it remained the most powerful telescope in the world and witnessed many remarkable discoveries in the furthest reaches of space. These later developments were made possible by the construction of a new road to Mount Wilson. This new road, initially constructed as a trail in 1891, was improved to carry vehicles in 1907 and then began operation as the Mount Wilson Toll Road. It followed an easier but longer route up Eaton Canyon, some distance west of the old trail. The two routes met at a point just below the Harvard-Wilson saddle.

The construction of this new road reduced the use of the old Mount Wilson Trail. Nevertheless, the old trail continued to attract hikers for many years until it fell into disuse during the Second World War. Fortunately, several dedicated Sierra Madre residents devoted substantial time and effort to the maintenance of the old trail. It might otherwise have disappeared entirely for each winter the rains inevitably cause significant damage. During the 1950s, Bill Wark and a group of volunteers put much effort into restoring the trail and, for over thirty years, Ambrose Zarro (who became known as the "Grand Old Man of the Trail") almost singlehandedly maintained it in good condition. The hiking community mourned Ambrose's death in 1990.

The Mount Wilson Trail Race was inaugurated in 1908 when a very tough group of young men, raced up the trail from Sierra Madre, rested for half and hour at the summit, and then raced down to Sierra Madre again. Thus began the tradition of the second oldest foot race in California. The event was held sporadically until the early 1950s. After a hiatus of more than ten years, it was revived in the fall of 1965 and then, in the spring of 1967, it took its present form as part of "Search and Rescue Days", held to promote interest in and support for Sierra Madre's volunteer Mountain Search and Rescue Team. The present race is about half the length of the original event. The start and finish lines are in Kersting Court in the center of Sierra Madre. Participants race up Baldwin Avenue, turn right on Mira Monte and then left onto the trail. They proceed

up the steep trail to Orchard Camp, about 4.2 miles from the start, where, after touching the large oak, they turn around and retrace their steps. The elevation gain is about 2100ft along a trail that is rarely more than three feet wide and has vertical drops of several hundred feet in many places. The return run downhill is almost as difficult since the front runners and back markers must negotiate their way past one another on the narrow trail. The difficulty of the event depends somewhat on the state of the trail and this varies considerably from year to year depending on the extent of the storm damage during the preceding winter. Therefore, records are not kept; however, the winner in 1992, Michael Gottardi, completed the course in 58 minutes and 19 seconds.

Looking back, I cannot be sure of the exact progression of events that led me to enter the 1994 Mount Wilson Trail Race. I know that I became aware of the race shortly after we first moved to Sierra Madre in 1980. At some point in the middle or late 1980s, my son and I began to jokingly challenge one another to enter. Each year, about two weeks prior to the race, the city would erect a banner over Baldwin Avenue, announcing the event. By that time it was too late to prepare for the race and so another year would go by. I had serious doubts that my rugby-damaged knees were strong enough to participate without buckling and thereby causing debilitating injury. However, by 1994 all the hiking had strengthened my knees to the point where participation seemed feasible. Moreover, early in 1994, an announcement of the race in the local newspaper, the Sierra Madre News, caught my attention in lots of time to allow for preparatory training.

In my entire life, I had never entered a contest of this sort and therefore I had many trepidations. But I loved the trail and Orchard Camp in particular. Many, many times I had hiked up to the shadow of the great oak and it became a significant symbol of the enduring wonder of the San Gabriels. Almost wilfully I entered the race and, about a month before the event, I made my first very tentative attempts to run up the trail. The first few times, beginning at our home, I could not even run to the trailhead without stopping. The slope of Baldwin Avenue was more than I could surmount and I would have to stop to haul great lungfulls of breath into my body. I would then force myself onward at a modest walking pace only to find that, on the steep trail, I could not even keep that up without stopping. It was all most humbling especially since I thought I had acquired some level of fitness. Even when I turned around to come down after only a mile or so, further indignities awaited me. The jarring motion caused by running downhill was very hard on my knees, but that I expected. What I did not expect was that my belly flopped up and down in a way that rapidly became painful and caused me to stop even before my knees did. It was all quite depressing. I should have concluded that my participation in the race was foolhardy at best; I could probably have minimized the teasing of my family by claiming that my knees simply could not absorb the punishment. But I also remembered a moment from my youth when I gave up during a cross-country race because I felt sick. I have never quite forgiven myself for that failure and I knew I could not repeat it. So I forced myself to attack the trail again. I went to the athletic store and purchased a corset of the kind worn by many

athletes and that helped damp the motions of my belly. I bought a proper pair of running shoes and that helped my knees. As the days past, I found I could go a little further without stopping and that I could get further up the trail without turning around. I still had to walk most of the way up the steep trail but at least it was a fast walk and, after three weeks, I managed, for the first time, to make it all the way to Orchard Camp without stopping. Now, however, only a week remained before the race.

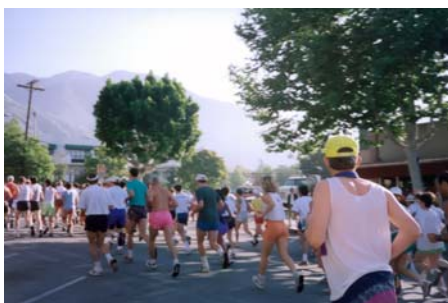
I had, clearly, left it much too late to begin training. There was no alternative but to allow my body to recover somewhat before the big day. So, during that last week, I concentrated on shorter efforts. I tried each day to reach First Water as fast as possible. One of the first such efforts coincided with a day that was significant hotter than at any time during previous training. The higher temperature caused me to overheat, bringing on an attack of nausea. I had to stop before First Water to be sick at the side of the trail. As I sprawled on the sand at the side of the trail, I could not help but question my own sanity. Yet I knew that much of what I had ever achieved had come from an uncompromising determination to persevere and that I would have to continue. When the nausea subsided, I resolved not to be defeated and struggled on to First Water. I avidly hoped that it would be cooler on the day of the race.

Thus my inadequate training came to a close two days before the race. I was fairly sure I could finish the race even though I had only completed the full course once. I had encountered others training on the hill and had few allusions about my own prowess. But I hoped that I would not finish last.

On the morning of May 28, 1994, I arose before dawn and began my physical and mental preparations with too much time to spare. About 7am Doreen drove me down the few hundred yards to the center of our village, the intersection of Baldwin Avenue and Sierra Madre Boulevard. Already this was a hive of activity with numerous volunteer race officials and other spectators. The prospective participants milled around exuding a nervous energy as they trotted on the spot or made brief sprints up the hill as much to test their resolve as to warm up. I figured that I would be warm quite soon enough for the morning showed all the signs of being hot. I made my way over to the check-in table and, very efficiently, received a plastic bag containing my commemorative tee shirt and my number plate. I hesitated for a moment before attaching the latter to my chest for I recognized that I would then be committed to participation. My number was 19. I thought that this moderately-sized prime number was appropriate to my circumstances and idly wondered if it would be notorious in the annals of the Mountain Wilson Trail Race.

Nearly 200 runners had shown up but only a few were determined to jostle for the most advantageous places on the starting line. The rest seemed less competitive, more focussed on simple survival. We gathered in a dilute group, behind the Start banner strung across Baldwin Avenue. As the starting time approached, I placed myself strategically at the back and side of the pack.

It was a genuine thrill when the starter's gun went off and we moved, en masse, up Baldwin. There was a sense of epic, of sallying forth where only the brave would venture. But this did not last long for that surge of adrenalin



Left: Starting up the hill. Right: Approaching the finish.

made me begin too fast and I had barely reached the turn onto Mira Monte before I was gasping for breath. Near the start of the trail itself I slowed to my accustomed fast walk and began to settle into a pace I could maintain. Already I was near the rear of the pack, just a few stragglers behind me. However, there was a continuous line ahead of me so I was still “in contact” with the mass of participants. As the trail wound back and forth I could see that line snake up the mountain, stretching as it went. The initial steep ascent up the switchbacks that climb the western wall of Little Santa Anita, was made more difficult by the heat. There is little shade on this part of the trail and the morning sun seemed merciless. But I breathed as deeply and regularly as I could and fended off the nausea, knowing that this was the worst part of the course. I knew that, had it been cooler, I could have gone faster but not by that much.

The first water stop manned by the Boy Scouts was, appropriately, at First Water. This was a most welcome way station for the psychological lift as much as for the water. Another steep but short section follows First Water and as I ascended this section, I felt an increasing strength and my rhythm increased slightly. I began to experience the pleasure of passing other runners; indeed, I was clearly making progress relative to the others at the back of the pack.

An exciting moment occurred when shouts of “Runner coming!” were relayed down the mountain. The leader (and eventual winner), Michael Gottardi, came gliding down the trail at an amazing speed. We all stood to the side of the trail to let him pass unimpeded and to marvel at his grace. It still looked like a suicidal speed to me but he made it seem easy. He was well ahead and it was some minutes before the cry of “Runner coming” went up again. Soon it became so common as to be superfluous.

There is a small clearing on a ridge, used as an emergency helicopter pad, that marks the three-quarter point on the way to Orchard Camp. Here the trail becomes less steep and I was able to sustain a run over this flatter section. Moreover, the canyon is heavily forested along this stretch. The cool of the shade and my rising excitement and confidence as Orchard Camp grew nearer, gave me further strength. I continued to pass other runners. As I reached the summit and ran the last hundred yards downhill into Orchard Camp, it was with a real joy for life that I greeted the crowd of officials and Boy Scouts

gathered under the great oak. They had placed a hat on the ground to mark the turn-around point but I walked on a few paces to the trunk of the oak. I placed my hands on its ancient surface and, for a brief and silent moment, paid reverence in my own way.

But only for a moment for there were still 4.2 miles to go. By now the back markers were widely separated and so, for long sections, I was running alone. For the first downhill mile, I encountered the stragglers on their way up the mountain but soon even they were gone. Still exhilarated, I looked forward to passing the Mountain Rescue people stationed at each of the danger points and amused myself by asking "Where's the bus?" as I passed. The later part of the descent was hard because my knees became sore and then numb from the continuous pounding. The numbness induced a sense of instability and inevitably I slowed a little, losing a few places to younger and more robust bodies. But the descent takes about half of the time required for the ascent and so it was not long before I neared the end of the trail. People were gathered at the intersection on Mira Monte and they seemed to cheer and clap for me as much as everyone else.

On Mira Monte there is a brief uphill rise to the intersection with Baldwin, and it took substantial will-power to extract the energy to mount that rise. My lungs and legs seemed about to collapse as I turned the corner. Then I could see the Finish Line in the distance. All I had to do was to coast down the hill in order to finish. The pain seemed to evaporate and my speed increased. Though truly exhausted, the die was cast and I was going to finish in some respectable fashion. Then Doreen was there and smiling broadly. And many folks still formed a crowd on both sides of the road over the last 30 yards or so. Their claps and cheers had almost a direct physical effect in spurring me on over the last few yards.

And then one of those moments arose that colored my memory of the race for ever after. For a period during the ascent I had run along with a young couple who were obviously deeply in love and who ran with joy in themselves and joy with the mountains and the world. I had taken a vicarious pleasure in their happiness. They were among those I had passed during the later stages of the ascent. But now, as I approached the finish they were rapidly gaining on me though without my knowing of their approach. Within yards of the finish they drew level and I suddenly became aware of their presence. Surprised, some basic instinct caused me to accelerate and, in addition, to say something like "Oh no!" as if to say "Please don't pass me now!". It all occurred so quickly that I cannot be sure of exactly what happened, but either because of my acceleration or because they slowed down in response to my remark, I finished a few feet ahead of them. I have always felt a sense of guilt about that moment. What possible difference did it make whether I finished ahead of or behind them! Surely it would have been especially nice for both of them if their final, joint effort could have been rewarded by passing a competitor at the finish. If I had it to do again with the benefit of hindsight I would have it otherwise but, then, one cannot dwell on such regrets. Hopefully, they were so absorbed in each other that they were oblivious to the moment.

Soon, however, we were all lost in the crowd at the finish. Someone stripped off the tab at the bottom of my number plate so that my official finishing position and time could be registered. I had completed the course in 2 hours, 11 minutes and 28 seconds. I was the 25th and last male resident of Sierra Madre to finish. I was the 26th finisher in the 50-59 age bracket. But I was third in the category of Sierra Madre residents aged 50-59! Admittedly this category was not a large one.

But whatever the statistics, the Mount Wilson Trail has left in me the complementary memories of an ancient and enduring beauty, the magnificent oak of Orchard Camp, and the fleeting, ephemeral beauty of two young people running together with joy and love on a balmy summer day.

Chapter 12

CASCADES OF THE KERN

*“One moment, on the rapid’s top, our boat
Hung poised - and then the darting river of Life
(Such now, methought, it was), the river of Life
Loud thundering, bore us by; swift, swift it foamed”*

From “A Dream” by Matthew Arnold.

They called it the “Gusto Run” and described it as 13 miles of exhilarating Class III-IV whitewater on the infamous Lower Kern in the southern Sierra Nevada. I would come to remember it as a special experience.

The Kern is, perhaps, the most famous and the most notorious river in California. Born high in the Sierra Nevada where a group of icy lakes above the tree line feed their melt water into a rugged canyon, it gathers depth as it flows south past the western shadow of Mount Whitney. Most of the runoff from the Sierra Nevada flows east or west, the directions of obvious descent. In contrast the stubborn Kern cuts north-south down the spine of the Sierra Nevada before it slides out of the southwestern end of that great mountain range. In the process it falls from over 11000ft through a series of gorges down to the 500ft elevation of the San Joaquin Valley. Near the end of this epic 170 mile journey, man has interrupted the flow by building the dam that forms Lake Isabella. The river downstream of the dam is known as the Lower Kern and passes through a steep and dramatic gorge on its way to the Valley bottom. This part of the river, though very rugged, is quite accessible because of the highway that runs the whole length of the gorge from Lake Isabella to Bakersfield. Here is where the river gains its notoriety. Due to its ease of accessibility, many people are drowned each year when they unwisely venture into the Lower Kern. As a measure of how rugged the whitewater is, there is one section of Class VII

rapids; Class VII is certain death, unrunnable in any boat. Because of all the great whitewater both above and below the reservoir, Lake Isabella is a mecca for whitewater adventures of all kinds. Many commercial companies based in the towns on the shores of Lake Isabella, offer whitewater adventures of all levels in kayaks and rafts. Because its flow is regulated by the dam and because of its violent rapids, the Lower Kern is particularly suited for the more radical commercial trips. Thus most of the companies offer a two day adventure on the Lower Kern, the second day being the more violent and challenging. A company called Kern River Tours called this its “Gusto Run”.

For many years I had harbored an unfocused desire to try whitewater rafting and in the summer of 1995, when a store in Kernville by the name of Sierra South mailed me one of its brochures, I decided to fulfill this ambition. Somehow I persuaded myself to bypass all the easier trips and aim for one of the more vigorous adventures offered by Kern River Tours, an outing called the “Gusto Run”. On impulse one day that summer I called and reserved a place on the Gusto Run and, in return, was given directions to the headquarters of Kern River Tours.

So it was that on the appointed morning, having spent the preceding night in a campground ominously named Hospital Flat, I arrived at the hanger-like shed near Lake Isabella Dam that served as headquarters for Kern River Tours. As always I was early and the mood seemed remarkably casual as the employees readied for another humdrum day of adventure. I guess one becomes immune to adrenalin. However, it was not long before the action heated up and equipment began to be sorted and loaded onto trailers.

Finally, all the clients seemed to have shown up and we were each issued with life jackets and paddles. Once equipped we loaded ourselves and our gear into the Kern River Tours bus and set off down highway 178, headed for the gorge of the Lower Kern. Soon we were descending a steep dirt road to the sandy beach that served as the put-in point for Kern River Tours. There we were divided up into teams of six, each of which would occupy one of the six rafts. Then we were given basic instructions. These focussed first on the mechanics of paddling and then on what to do in the event of a variety of mishaps. Finally each team of six was assigned to a guide. Virtually all of the guides were wizened “river rats” whose nonchalance conveyed an aura of confidence. One, however, was a young blonde high-school girl. My team was assigned to her guidance.

We set sail from the put-in beach in eager anticipation of a dramatic and exciting day. After Remington Hot Springs, the first of a series of riverside hot springs that we were to pass, we came to the first couple of whitewater rapids, White Maidens Walkway and Sundown Falls. They were vigorous but readily negotiated. The Silver Staircase followed and, after running the rapid, each raft in turn maneuvered itself so as to surf in one of the large waves below the cataract. It looked like a straightforward maneuver to me and so I was not particularly alert to the possible mishaps that might occur. Consequently, I think that my feet were not wedged firmly enough into the rubber pockets sewn into the floor of the raft; it should be noted that these footholds constituted the primary means of securing one’s position in the raft. As we slid sideways toward

the surfing wave, I very suddenly found myself airborne and then underwater. I surfaced beside the raft and was quickly pulled aboard by the others. It was a salutary lesson in how quickly things can go wrong. However, I had spent only a brief time in the water and emerged from the incident with some composure remaining.

Next came Buffalo Run, negotiated without incident. Despite my dunking, our team in the last of the rafts, was beginning to feel some degree of confidence that we might actually make it through the day without further incident. But we also knew that we were approaching one of the most insidious of the cataracts on the Lower Kern, a long stretch of whitewater known as Dead Man's Curve. What we did not know was that there was a notorious whitewater hole right at the top of Dead Man's Curve. With years of experience, Kern River Tours knew well where to station a photographer for the day's most dramatic shots. So the next sequence of events were graphically recorded on film. Ahead of us, the rafts guided by the wizened and experienced river rats seemed to negotiate Dead Man's Curve with little difficulty. So the first of the three photographs shows the last raft with a composed crew (especially the gent at the left rear of the boat in the blue baseball cap) being vigorously instructed by the young, blonde guide in the rear of the boat. Moments later, and just a few yards downstream, the second photograph clearly demonstrates that the situation is rapidly deteriorating as the raft encounters the "hole" at the top of Dead Man's Curve. The guide seems to have completely disappeared and paddles are flying. Note that the gent in the left rear has maintained his composure and his paddling stance. In the next instant the raft loops the loop and everyone ends up in the whitewater. The photographer continues to record the disaster and his third photograph captures an empty airborne raft. It also happens to capture, at the lower right, the gent from the left rear, now capless and composureless.

To me the surprise was that it all happened so suddenly. One moment I was focussed on my paddling duty; the next I was swirling madly through churning whitewater trying to find some air to breathe. At the orientation session we had been instructed to try to float down the rapids feet first. I had no control whatsoever over either my trajectory or my orientation. I was simply tumbled down the remaining hundred yards of Dead Man's Curve while struggling desperately to find a moment in which to gulp in air. Within just a few moments I was unceremoniously delivered to a quiet pool below the cascade where I limply swam ashore. Most of the rest of the team found themselves at the same beach. This included our guide who was desperately trying to locate the remaining members of the team. Within moments she had done so and we began to try to retrieve whatever belongings were still floating by. My cap and glasses were long gone.

The adrenalin was still coursing through my bloodstream as we reassembled the crew and boarded the boat for further challenges. The next cataract, False Flush, was successfully negotiated and we then disembarked in order to portage around the unrunnable Class VII rapid, Royal Flush. Needless to say we took time to inspect this maelstrom from the safety of the overlooking cliffs. One could readily see how any boat or person would get lethally trapped in its



Note gent at left rear of the raft



Problems!



Disaster!!

whitewater vortex.

Just downstream of Royal Flush we stopped for lunch at a comfortable and shady beach. An overturned raft served as a fine table upon which was spread a royal feast. In the quiet cool of the shade, with a fine meal in my belly, I began to recover some sense of equilibrium. Several of the young people enjoyed jumping into the river from a high rock nearby; I opted to maximize my equilibrium in preparation for the afternoon's adventures. But we had already experienced the toughest part of the Gusto Run. With the discipline derived from the morning's mistakes we adroitly negotiated the afternoon's cascades. Fish Trap Rapid, Bottoms Up, Surprise, Hari Kari, Horseshoe Falls, Patch Corner, and Pinball all passed without incident, indeed with some display of coordination and competence. This brought a substantial sense of pleasure and accomplishment, strengthened by an intimate knowledge of what can go wrong.

We had been on the river for nearly five hours and exhaustion brought about not only by physical exertion but also by the drain of nervous energy, began to take its toll. Fortunately the river had come to a gentle stretch of meanders where we could relax, swim alongside and unwind from the day's earlier exertions. So we drifted down to Democrat beach, the takeout point. The bus was waiting for us and it did not take long to load all of the equipment and people for the drive back to Lake Isabella and the headquarters of Kern River Tours.

It had been a truly awesome experience and one whose thrill I would always remember. But for one dreadful moment I thought I had breathed my last and that moment inevitably colored my recollections for ever after. For the raw beauty of the river I would do it again. But not without a fear of that powerless moment when my fate was entirely beyond my control.

Chapter 13

VOLCANO

“These men set out and made every effort to climb to the summit but without success on account of the thickness of the snow, the repeated wind storms in which ashes from the volcano were blown in their faces but they reached very near the top, so near in fact that being there when the smoke began to rush out, they reported it did so with such noise and violence that the whole mountain seemed to fall down”

Except from a letter to King Carlos V of Spain from Hernando Cortés, dated Oct.30, 1520 (translated by J. Bayard Morris).

About 50 miles southeast of Mexico City, two massive volcanoes rise together out of the valley of the sun, reaching almost 18,000ft into the sky. The Aztecs called them the “Smoking Mountain” or Popocatépetl and the “Sleeping Woman” or Iztaccihuatl, and viewed them with awe and reverence. According to their legends, the warrior Popocatépetl fell in love with Iztaccihuatl who was the daughter of the emperor. After he had won a great victory against the enemies of the Aztecs, Popocatépetl resolved to return and claim her hand. However, his rivals sent forward word that he had been killed in the battle and, distraught, Iztaccihuatl died of grief. To assuage his pain, Popocatépetl built the two great mountains placing the body of Iztaccihuatl on one. He stands forever on the other, holding her smoking funeral torch aloft. Despite this association with their gods, Aztec belief did not forbid the exploration of these mountains and it is therefore possible that they climbed these peaks though no written or verbal record remains to confirm this. High on the side of Popocatépetl is a rocky projection known as the Ventorrillo on which were found the remains of a small enclosure that was built by the forerunners of the Aztecs about 900 AD. In the same vicinity, a number of artifacts including pieces of pottery, and parts of a jade necklace and obsidian knife were also found. In view of these relics it

would be surprising if some young and adventurous Aztecs had not ventured up another three thousand feet to investigate the source of the noise and smoke.

Geologists tell us that, for the past 10,000 years, Popocatepetl has alternated between periods of vigorous explosive activity and periods of less effusive behavior. The activity has varied from mild steam-and-ash emissions to plinian eruptions accompanied by pyroclastic flows and surges. The current active period began about 1200BP with an explosive eruption that enlarged the summit crater. Another explosion about 1000BP produced a pyroclastic flow that descended the northern flank. The Aztec codices provide a historical record of many eruptions beginning with one in 1345AD. Another large explosive eruption occurred in 1519 and another, perhaps, in 1663. Lava flows in the vicinity of the summit may also have occurred in historical time but cannot be attributed to specific eruptions. The last significant activity occurred in 1920-22 though minor ash clouds were observed in 1923-24, 1933, 1942-43 and 1947.

In March of 1519, Hernando Cortés landed in Veracruz at the start of his epic quest to conquer the land of the Aztecs. By chance, when Cortés arrived in Cholula (near Puebla) in October, 1519, Popocatepetl was erupting. In a letter to King Carlos V of Spain, Cortés described the scene:

“Eight leagues from this city of Cholula there are two marvelously high mountains whose summits still at the end of August are covered with snow so that nothing else can be seen of them. From the higher of the two (Popocatepetl) both by day and by night a great column of smoke comes forth and rises up into the clouds as straight as a staff, with such force that although a very violent wind continuously blows over the mountain range, yet it cannot change the direction of the column.”

The Indians advised Cortés that it was not possible for anyone to reach the summit and survive. But, rising to the implicit challenge, the conquistador responded as described in the same letter:

“... I was eager to know the secret of this which seemed to me not a little marvelous and accordingly I sent ten men such as were well fitted for the expedition with certain natives to guide them to find out the secret of the smoke, where and how it arose. These men set out and made every effort to climb to the summit but without success on account of the thickness of the snow, the repeated wind storms in which ashes from the volcano were blown in their faces, and also the great severity of the temperature, but they reached very near the top, so near in fact that being there when the smoke began to rush out, they reported it did so with such noise and violence that the whole mountain seemed to fall down; thereupon they descended, bringing a quantity of snow and icicles for us to see....”

The leader of this expedition was Diego de Ordaz who claimed that, contrary to Cortés's account, he had, in fact, reached the summit. A number of

chroniclers of the time give credence to his version of the story. Ordaz claimed to have looked down into the spectacular crater on the summit and compared it to an oven in which glass is made. Cortés may have down-played Ordaz's accomplishments because of a developing rivalry between the two of them. King Carlos V granted Ordaz the right to include a volcano in the family crest, thus giving a seal of royal approval to Ordaz's account of the adventure.

During his legendary march from the coast, Cortés approached the Aztec capital by climbing the pass between Popocatepetl and Iztaccihuatl and the saddle, at an elevation of 12,000ft, is now called Paso de Cortés. Two years later, in 1521, after his conquest of the Aztecs, the conquistador's army was running short of gunpowder and so Cortés dispatched Francisco Montano and four other men to climb Popocatepetl in an attempt to obtain sulphur from the crater. Unlike the earlier adventure, the story of this second expedition has been confirmed by historians and so must rank as the first known ascent of the mountain. With great publicity, Montano and his companions set out accompanied by Indians carrying supplies including ropes and blankets. A crowd of spectators gathered at the base of the volcano and waited with curiosity to see how matters would unfold. At the end of the first day, the expedition camped some distance above the snow line by digging a snow cave. However, during the night they were driven from their cave by sulphur fumes and the cold. Outside the night was black, the stars being obscured by the clouds and smoke. As they moved about to keep warm, one of the soldiers fell into a crevasse, from which he was lucky to be rescued unharmed.

At daylight they resumed their ascent only to be halted by a eruption that caused them to run for shelter from the falling debris. Though one soldier could not continue, the rest pressed on and eventually reached the crater at which moment another minor eruption took place. When the smoke cleared, they could see roiling pools of lava below. They cast lots to see who would venture down into the crater first and, appropriately, it fell to the leader, Montano, to be the trail-blazer. Thereupon, he was lowered by means of a makeshift rope, some 600ft down into the crater. Not only did he risk the possibility of failure of the rope, but also the very real hazard of asphyxiation, not to mention the risk of another explosive eruption. Apparently, he survived seven separate sorties into the inferno bringing back a load of sulphur each time. Another soldier then took over and, after six additional trips, they had accumulated some 60lbs of the sulphur that had motivated the expedition in the first place. This they hauled down the mountain to be greeted like conquering heroes. A triumphal procession accompanied them back to the capital where, it is said, that Cortés himself came out to greet them. However, this method of procuring sulphur was not the most efficacious and, in a later letter to the king, Cortés admits that it was easier to order shipments from Spain. However, Montano and his companions achieved immortality for the first documented ascent of Popocatepetl.

Thousands of climbers have reached the top of Popocatepetl since the days of Cortés and Montano and it is now such a well-traveled trail that even fairly inexperienced climbers can succeed without undue hardship or danger. A winding, asphalt road was built from the town of Amecameca (elevation 8070ft) right

up to the Paso de Cortés at an altitude of about 12000ft. From this saddle, the road continues some distance up toward Popocatepetl, terminating at Tlamacas (12960ft) where several facilities have been built to serve both day trippers and climbers. In particular, the Vicente Guerrero Lodge provides dormitory accommodations and facilities for climbers and other visitors. From Tlamacas, there are several standard routes by which to climb Popocatepetl, all of which we found described in R.J.Secor's book, "A climbing guide to Mexico's volcanoes".

After our successful ascent of the Mountain of the Devil, Doug Hart and I began to think about our next Mexican adventure and naturally started to consider an ascent of one of the large volcanoes. Eventually, these plans began to solidify and, with the help of one former Caltech student now resident in Mexico, Francisco Avila Segura, and one current Mexican student, Roberto Zenit Camacho, we made the necessary reservations. The party would consist of a Caltech graduate student, Garrett Reisman, Doug Hart and myself; Doug's wife Ann would accompany him but would not climb the mountain. We arranged flights to arrive in Mexico City on Jan. 8, 1995, and made reservations at the Tlamacas lodge for at least four nights starting on Jan.10. We had allowed time for acclimatization and visualized the possibility of climbing both Popocatepetl and, a day or two later, Iztaccihuatl.

Date: Wed, 21 Dec 94 05:58:34 -0700

From: Francisco Avila Segura jfas@iimtemix.unam.mx;

To: brennen@accord.cco.caltech.edu

Dear Dr. Brennen,

El Popocatepetl sent tons of ashes to the atmosphere today in the morning, it was not the usual 'fumarolas' but something else, you should be aware of this when you come and ask around. Roberto tells me I wish you the best of fun in Mexico and a happy new year,

Sincerely Yours,

Francisco

Date: Thu, 22 Dec 94 04:27:25 -0700

From: Francisco Avila Segura jfas@iimtemix.unam.mx;

To: brennen@accord.cco.caltech.edu

Dear Dr. Brennen,

Last night 75000 people were evacuated from around Popocatepetl, so it may be quite serious. It has been trembling and having small (apparently) eruptions. I call the people in charge of the reservations in Tlamacas to ask for information but so far they have none.....

Francisco

Date: Wed, 21 Dec 1994 22:18:05 -0700 (MST)
From: Global Volcanism Network ;MNHMSO17@siu.edu;
Subject: Popocatepetl, 21 Dec 1994

A UPI news story reports that three explosions on the afternoon of 21 December (between 1330 and 1400 local time) caused ash fall in Puebla, about 45 km E. A resident was quoted as saying "The street is all white, as if flour had been thrown." Servando de la Cruz (UNAM) was quoted as saying that the activity was similar to 1921 and in the 1940's, but that there was no other activity, and microseismicity was continuing "in a very moderate manner". NBC News (USA) showed a few seconds of footage of the steaming volcano, apparently taken from a helicopter, tonight (21 Dec).....

Date: Thu, 22 Dec 1994 14:34:46 -0700 (MST)
From: "Rick Wunderman, Global Volcanism Network"
Subject: Popocatepetl, 21 December Eruption

..... A 21 December Associated Press story by Lawrence Kootnikoff said Popocatepetl, "spewed a column of roiling black ash Wednesday, dusting villages and farmland but causing no injuries." "Television footage from traffic helicopters showed a dense column of ash belching from the summit. Reporters aboard the helicopters said the ash appeared to be blowing away from Mexico City to the southeast." A 21 December Reuter story stated Popocatepetl had "five minor eruptions". The story also noted that authorities estimated the mass of ash fall as about 5000 tons and that they had only evacuated a few people.

Date: Fri, 23 Dec 1994 16:47:45 -0700 (MST)
From: Rick Wunderman, Global Volcanism Network
Subject: Popocatepetl

..... A helicopter flight at 10:30 showed that most of the ash was issued near the lower rim of the inclined crater at the NE sector. A radial fissure could be observed on the NE flank of the cone. Some steam-producing vents could also be observed along the fissure, though the cloudy conditions makes this interpretation doubtful. Old cracks in the glacier appeared to have extended a significant amount toward the W....

..... At this stage an evacuation of the most vulnerable towns and villages of the East sector of the volcano was started around 21:00 of

December 21, and about 31,000 persons were moved during the night to shelters in safer areas.

..... As of Friday, 23 December, an AP report stated that the Puebla state government said 75,000 people would be evacuated from the countryside around the volcano. One of the evacuated towns, Santiago Xalitzintla, is located about 13km NE of the summit and sits along the road over the pass between Popocatepetl and Iztaccihuatl.

Date: Tue, 27 Dec 94 12:48:49 -0600 (CST)

From: Mena Iniesta Baltasar-IIM jmena@redvaxi.dgsca.unam.mx;

To: Christopher Brennen jbrennen@cco.caltech.edu;

Subject: Roberto calling....

Dr. Brennen,

I've been following the news about Popo. The Tlamacas lodge has been closed. Twenty thousand people were evacuated. Reports from today's paper said that the volcano's activity hasn't increased in the last few days, but they are still under alert. It isn't clear when this alert state is gonna change. It is impossible to get to Tlamacas right now. Let me know what you think. Right now I wouldn't suggest you to come. It's unfortunate....

Roberto

And so, just days before we were to embark on this adventure, the mountain balked and we were forced to cancel our attempt to climb Popocatepetl. The volcano continued to rumble for several years and the lodge at Tlamacas remained closed. Thus, even if we had wanted, foolishly, to attempt the climb, the logistics would have been considerably more difficult. In fact, we did make preliminary plans to reschedule the trip the following year but cancelled again when it was clear that there was little change in the situation.

Date: Tue, 5 Mar 1996 16:58:49 MST

From: Global Volcanism Network jMNHMSO17@sivm.si.edu;

Subject: Popocatepetl Eruption, 5 March 1996

At 03:49:30 on March 5, an ash emission event was detected at Popocatepetl Volcano. A continous seismic signal of variable amplitude started abruptly at that time.... Mild ashfalls have been reported in the immediate area around the volcano, particularly in the North sector. During a helicopter reconnaissance flight, at 1200, ash deposits were confirmed, especially in the close neighbourhood of Tlamacas, and covering the snow cap. An ash and gas column about 800m high rising vertically could be seen, height at which it dispersed in a long plume towards the NorthEast. A sulphur smell



Eruption of June 1997.

could clearly be perceived near the crater. The emission of gas, steam and ash appeared to be generated from the same three sources in the eastern internal side of the crater that produced the 1994-95 activity. In general terms, this event seems very similar to that of December 21, 1994, but perhaps about an order of magnitude lower, and comparable to the levels of activity observed on December 26, 1994.

And from another source:

After several months during which only fumarolic gases were being emitted at Popocatepetl it is now certain that emissions of ash resumed this morning. I just returned from a helicopter reconnaissance flight around Popo. The glacier and snow are entirely covered by ash, confirming statements made by direct witnesses who saw ash emissions this morning. From vents located at the base of the eastern inner crater walls a vigorous column of steam could be seen at 12.00pm from the helicopter. Seismograms indicate that the renewed emission of ash might have started this morning at 3.50am.

*Date: Mon, 1 Apr 1996 13:39:54 MST
From: Hugo Delgado
Subject: Popo update*

.....On Friday (March 29), during a COSPEC flight, Lucio Cardenas, Juan Jose Ramirez and Hugo Delgado observed the appearance of a lava dome on the eastern side of the crater floor with an area of

400 sq. m. emplaced on the rim of the inner crater (a destroyed lava dome that formed during the 1920-1927 eruption). This lava dome was observed coming out from a source outside that inner crater but flowing into it. Today (April 1st) the dome was checked again and was observed filling up most of the inner crater (nearly 60 m deep) and increasing its area to nearly 600 sq. m. Close observation of the phenomena is planned through helicopter flights and COSPEC measurements besides the telemetered seismic and geodetic network.....

Date: Fri, 3 May 1996 14:19:32 MST
From: Claus Siebe
Subject: Popo update

On March 29 juvenile lava that started forming a viscous, presumably dacitic dome was first observed by Hugo Delgado during a COSPEC flight. Since then the dome did grow at a rapid rate. Emissions of ash along a NE-SW running fracture located at the SE inner wall of the main crater have also continued intermittently. Apparently, the emission center of the new domes is located between this fracture and the center of the small inner crater formed during the eruption in the 1920s. I did attend helicopter overflights on April 10, 12, 24 and 29. On all these occasions the gases emanating from the dome did not allow a clear view. The height of the dome was difficult to estimate but was at least 50 m. The dome was in addition growing horizontally.... By comparing pictures of the dome formed in the 1920s with the present dome it is absolutely clear that the present dome is by now already much larger... On April 30 at 13.19pm local time a major explosion occurred at the new dome. A shower of ejecta was dispersed towards the NE. Maximum clast diameter was 0.5cm in the village of Xalitzintla, ca 12km NE of the crater, sand-sized ash fell in the city of Tlaxcala at a distance of 60km. Because of bad weather conditions, the explosion and accompanying phenomena were not recorded by the video camera aimed at Popo. Yesterday, May 2nd, five mountain climbers were found dead a few hundred meters below the NE crater rim on Popos slopes. Their corpses were recovered by Civil Protection authorities and the first information regarding the possible cause of their death was due to lightning, because of severe burns. Latest information indicates that the climbers ascended the mountain in the early morning of April 30 and were reported missing the following day. In addition to the severe 3rd degree burnings, the corpses do also show severe injuries by contusions. It appears that the climbers could also have been killed by the explosion on April 30. Autopsies of the corpses should soon reveal the cause of death. During a helicopter flight this morning (May 3) I could clearly observe a depression at the surface of the

new dome, near the SE inner wall of the main crater. In addition streaks of gravel and boulders were running down the NE outer slopes of the cone. These streaks of coarse material were 10 to 20m wide and a few hundred meters long and very close to the route of ascent to the mountain that is usually taken by most climbers. It is absolutely possible that similar explosions will occur again in the near future for which reason mountain climbers should take the signs posted at Paso de Cortes seriously and not attempt (by no means) to get around the official prohibition to climb Popo....

Nature, Volume 388, 17 July, 1997:

On 30 June 30, Popocatépetl showered ash over Mexico City, about 72km away, in its largest eruption since 1927.....

It would be easy to overdramatize the possibility. Nevertheless it seems clear that we came close to the fate that befell those five climbers on April 30, 1996. And so, within the span left to me, it seems unlikely that I will ever get the chance to climb Popocatépetl. Some things are not meant to be. But it would please me greatly to believe that, someday, one of my young friends might remember to place my name in the cairn on the summit of the "Smoking Mountain".

Chapter 14

SKULL CANYON

“One is always wrong to open a conversation with the Devil, for, however he goes about it, he always insists upon having the last word”.

From “Journals” (1917) by Andr Gide, translated by Justin O’Brien.

On October 22, 1995, about a week before Halloween, there occurred a series of events that seemed straight from a screenplay for the Twilight Zone. The central character was a rugged and spectacular canyon deep in the innermost reaches of the San Gabriel mountains. Appropriately enough, it is called Devil’s Canyon. The catch basin of this canyon forms a large part of the Devil’s Canyon Wilderness within the Angeles National Forest. This wilderness contains some of the most inaccessible terrain in the contiguous United States. There are probably canyons within its boundaries that have never witnessed a human footfall.

Devil’s Canyon (and the river that flows within it, year round) begins just to the west of the saddle separating Mount Waterman and Twin Peaks. It plunges into a deep ravine, travelling west for several miles before turning southward. At the turn the canyon broadens temporarily and so allows, at this point, the only practical access to its upper reaches. A steep but well-maintained trail descends about 1500ft from the Angeles Crest Highway to the canyon bottom. It meets the river at a beautiful spot where once I cooked dinner on a hiking stove for Doreen, myself and our two dogs. The trail continues on downstream for about a mile but then peters out as the canyon narrows again and the going becomes tougher and tougher. It is, however, possible to bushwhack one’s way on downstream for about another two miles, though progress is frequently slowed by the need to climb over boulders and down small waterfalls. Those who persist are rewarded by encountering the beautiful Devil’s Canyon Narrows where the river has cut a narrow and precipitous defile through solid rock, leaving a series of deep, clear pools separated by crystal cascades and two large waterfalls.

Because of the narrowness of the canyon, it is only with great difficulty and some danger that one can descend the canyon past the first or upper waterfall. Without technical climbing gear it is virtually impossible to proceed further and circumvent the lower waterfall.

To hike down the trail, along the canyon to the falls and return the same way is a very long and exhausting day hike. And, though it is possible to access Devil's Canyon from the downstream end by way of Cogswell reservoir, it is an even longer and harder hike to the falls from that direction. Consequently, despite their great natural beauty, the Devil's Canyon Narrows are rarely visited and retain an aura of great remoteness and true wilderness.

One day in the early 1990s, I was perusing the topographical maps of the region and began to investigate whether there was an easier way to reach the Devil's Canyon Narrows. I noticed that, at one point about 1.5 miles west of Charlton Flats, the Angeles Crest Highway comes quite close to the Narrows though it is some 1500ft up on the ridge above. The map showed a steep side canyon descending from the highway to join Devil's Canyon just north of the Narrows. I noted that, if one could descend this side canyon, the Narrows could then be reached by a significantly shorter route. However, this seemed highly unlikely. Experience had taught me that some combination of cliffs or impenetrable brush would almost certainly bar the way. Nevertheless, it seemed worth a try. So one day in 1991, I parked my car by the roadway and began to descend this side canyon. There appeared to be some evidence that others had earlier passed this way and that was encouraging but no guarantee of success. The narrow side canyon was mostly in the shade and so relatively free of the tough brush that made the surrounding slopes virtually impassable. But I started to encounter waterfalls that required climbing and, as these increased in size, I began to anticipate an encounter with one that I could not circumvent. In several places, I was only just able to negotiate my way down and around the falls by using narrow and airy ledges. But I continued to make progress and my confidence that I could reach the bottom and access Devil's Canyon began to increase. Indeed, I seemed almost there when I suddenly came upon a large and very precipitous waterfall, perhaps 100ft high. I made some effort to find a route around it to the north but concluded that no safe passage existed, at least in that direction. I abandoned my attempt at this point and climbed back up to the road.

Several years later, I had a couple of graduate students who were avid hikers. When I described this side canyon to them they were eager to explore it further in the hopes of finding a way to the falls. And, looking back at my earlier effort, I could visualize the possibility of a route to the south of the cliffs which had previously stopped me. And so, one Saturday in 1993, I climbed down the same side canyon with three students and, with greater ease than I anticipated, located a route to the south of the cliffs. Shortly thereafter we reached Devil's Canyon Narrows just above the falls. It was a hike that I repeated several times in the next couple of years, each time taking a different friend to the spectacular falls by this "secret" route. On one such hike in early 1995 I came across the skull of a bighorn sheep very close to the intersection of the side canyon and



Bighorn Sheep skull.

Devil's Canyon. I debated whether or not to carry it home but finally left it on top of a prominent rock, thinking that others would be rewarded by this curiosity after their long hike down the main canyon.

In late 1995, I again guided a small group including my colleagues Paul Jennings and David Wales down to the Narrows by the side canyon route. It was a beautiful autumn day and we climbed down the upper falls into the rugged canyon between the two large waterfalls. Paul fished the large pool below the upper falls and we ate a marvelous lunch in those bucolic surroundings. Then it was time to go home. As we prepared ourselves for the return climb up the side canyon, I thought I would wander a few yards upstream to that rock on which I had placed the bighorn skull some six months before. I had no difficulty locating the rock and there, indeed, was the skull still perched on the rock. Strange thing though. I was almost positive that I had placed the skull so that it faced downstream. Now it seemed turned to the right, facing up the side canyon by which we had gained access to the Narrows. Perhaps some animal had brushed against the skull.

The others were already entering the side canyon and so I made an impulsive decision not to leave the skull this time but to take it home as a memento, though a memento of what I was not entirely sure. I quickly wrapped it in an old towel, placed it in my backpack and just as quickly forgot about it as we began the long climb back to the highway.

There was no great hurry. It was a very pleasant day, not too hot or too cool for the ascent back up to the road. In places the climb is very steep indeed. Strangely my pack seemed lighter with the bighorn skull in it, almost as though I was being urged forward by some unseen power. But we had time to spare. So we stopped often to rest, to enjoy the surroundings and to engage in friendly chat.

As we approached the top we began to encounter the trash thrown from passing cars into the gully and the thick brush. I recall several automobile tires and the odd beer can, washed several hundred yards down the gully by the winter rains that do an effective job of scouring the steep and narrow gully. And then, quite suddenly, we were all standing quite transfixed in disbelief by

what lay in the gully ahead of us, half hidden in the sand. It was a human skull. Clearly and unmistakably, a human skull. Though missing the lower jaw, it was otherwise in good condition, if one can say such a thing about a human skull. After an extended pause, one of the others picked it up to examine it. It was not worn as it would have been had it been ancient; indeed traces of dried tissue could be detected in the vicinity of the neck. Moreover, it had a dental bridge of about four teeth still in its intended place. We guessed that it was probably only a few years old; that it had been dumped off the side of the road into the upper reaches of the gully, had rotted away and been torn apart by animals. Finally the skull must have been carried into the bottom of the gully and then swept down to the point where we found it.

We looked around somewhat cursorily for other bones without finding any. We also built a cairn of rocks to mark the spot and topped it with a rusty beer can found nearby. Then we put the skull in a plastic bag and carried it up to the road. I recall a sense of the surreal that characterized our activity after finding the skull.

When we reached the highway, there was an emergency telephone close by so I used it to speak with the Highway Patrol. After a confusing initial conversation during which the dispatcher asked for the nearest cross-street, I was patched through to one of the Ranger Stations of the US Forest Service. Shortly thereafter a whole succession of officials showed up: a US Forest Service Ranger, two LA Sheriffs, a Highway Patrol Officer, representatives from LA homicide and, last but not least, the Montrose Search and Rescue team. I wryly thought it a little late for the Search and Rescue team: in fact, they were needed to go down the gully to search the site for other remains. We described our marker for them and they thankfully did not follow through with their initial instinct that one of us should accompany them down to the scene of our discovery.

Each of the arriving officials did insist on taking all of our names and addresses regardless of how many times their predecessors had done so. This generated a concentrated collection of vehicles and people in the middle of the large clearing, a conglomeration that persisted for at least an hour in the late afternoon sun. And all this time the skull lay some distance away in its plastic bag, almost ignored until one officer decided to look at it. Even then his inspection was cursory. Finally, they decided that our presence was no longer constructive and we left to drive home.

The Pasadena Star News for the next day, Oct.22, 1995, published the following:

Hikers find body in Angeles Forest

Angeles National Forest - Hikers in the Angeles National Forest Saturday found what appeared to be a body, authorities said. The hikers were near Mile Marker 46.2, about 450 feet off Angeles Crest Highway, when they spotted the apparently human remains about 3 p.m. Los Angeles County Sheriff's Deputy Jim Hellmold said. Sheriff's homicide investigators were sent to the location, Hellmold said,

and it will be determined whether the remains are human. "It appears to be human, but we're not 100 percent certain at this point," Hellmold said.

As always with press reports, this was only roughly correct. It was a skull rather than a body we found and it was clearly a human skull. Unless of course, the officers knew of Caltech's reputation for pranks!

Weeks later my curiosity finally got the better of me and I managed to locate the LA homicide detective to whom the case had been assigned. Sergeant Watkins was very pleasant on the several occasions when I reached him by phone. But there had been no identification and he conveyed doubt there ever would be. And so, as far as I know, the case drifted into the nether-world of unresolved deaths. Yet somewhere, someone must still grieve for a lost loved one, and the agony of uncertainty must persist.

About six months later, I finally retrieved the bighorn skull from the closet in which it had lain since that October day. I washed it carefully and applied bleach to remove several stains. Then I placed my trophy on a prominent wooden shelf on our patio overlooking the garden. That winter night was bleak and thunder echoed in the distance as I went to bed. Much later something woke me and, as I often do, I wandered back to the kitchen for a snack from the fridge. As I looked out through the window into the darkness of our heavily wooded garden, a flash of lightning ripped across the sky, illuminating the skull for a frozen instant. It seemed to shine in the dark. It may have even turned a little to face me.

Chapter 15

ISLAND OF SAND

*“A thousand fantasies
Begin to throng into my memory,
Of calling shapes, and beck’ning shadows dire,
And airy tongues that syllable men’s names
On sands and shores and desert wildernesses.”*

From “Il Penseroso” by John Milton (1631).

Fraser Island, the island of sand, lies off the coast of Queensland, Australia, about 120 miles north of the city of Brisbane. It is the largest island in the world composed entirely of sand and has a structure that is the result of a huge supply of coastal sand combined with an unrelenting onshore breeze. These have created one of the longest beaches in the world, stretching almost unbroken for 75 miles along the east coast of Fraser Island. In a process of evolution that still continues, the on-shore wind then carries this sand up onto a whole series of patches of sand dunes called “sandblows” that stretch inland from the eastern shore. The sandblows are of the order of a mile in width and several miles long. On each, the sand builds up into dunes that move eastward raising the height of the land to over 700ft; these sand mountains drain to both the east and the west. As sand piles up on the beach, this process also results in new land added to the eastern side of the island. In between the sandblows are old dune fields that have been overgrown by brush while the old sand land to the west has been covered by older brush and forest. In places the result is open sandy scrub land; in other places it is now dense rain forest. The western coast, sheltered from the Pacific surf and storms, is relatively stagnant, in places dense mangrove swamp, in other places lined with soft beaches. In the central and western parts of the island there are many beautiful, clear water lakes, formed where the drainage has been interrupted by the traveling sand. And everywhere the streams consist of the clearest water flowing over sparkling sand beds with little rock to be seen anywhere. Indeed the absence of rock and stones underfoot or underwater, is

just one of the features that make this a very special place, fully deserving its designation as a World Heritage Site.

The wilder northern half of the island is now the Great Sandy National Park; the southern half is managed by the Queensland government as Fraser Island Recreation Area. Vehicle access and camping are by permit only. Visitors either arrive on guided tours in four-wheel-drive buses or in their own (or rented) vehicles. Buses and cars alike drive off the ferry onto the western beach and thence onto the system of rough dirt roads that are the main thoroughfares on the island. In addition, the long eastern beach makes for excellent driving and is the main north/south artery. A network of trails also allows exploration beyond the limits of the rough dirt roads.

The first European to encounter Fraser Island was probably the Portuguese explorer de Menonca who sailed this coast in 1521. During the subsequent 250 years, only occasional adventurers, Portuguese, Dutch and English, came this way leaving little trace and few chronicles. It was first documented in detail by James Cook, who landed on the island (he thought it was part of the mainland) in May 1770 and named many of its prominent features. The pace of exploration increased after Cook; Matthew Flinders landed near the northern cape in 1802 and others followed. The island became notorious in the aftermath of the adventures of James and Eliza Fraser.

In May 1836, the brig “Stirling Castle”, Captain James Fraser in command, set sail from Sydney for Singapore. A week later it was wrecked on a reef off what is now Rockhampton to the north of Fraser Island. Taking to the boats, the survivors, including Captain Fraser and his wife Eliza, drifted south for several weeks, eventually landing on what is now known as Fraser Island. There they resorted to walking south but were taken prisoner by a group of aborigines who stripped them naked and made them work. Captain Fraser was speared and died of his wounds several days later. During a two month sojourn on Fraser Island, other members of the group died or were killed. Eliza Fraser and the first mate,



Left: The eastern coast of Fraser Island. Right: Rain forest on Fraser Island.

Brown, eventually escaped with the assistance of one of their captors (probably an escaped convict by the name of David Bracewell who had been living with the tribe). In the aftermath, Eliza's story was widely circulated. She made many public appearances, retelling her story in more and more graphic detail with each repetition. As a result, the island gain notoriety and was thereafter known as Fraser Island.

The aborigines, a tribe called the Butchulla, had traditionally visited the island on a seasonal basis. In the 1860s they were forced out by the lumber companies who came to harvest the trees of the island's rain forest. That harvest included the valuable satinay trees with wood that had proved quite resistant to the marine pest that destroyed the ships hulls of the day. Logging on Fraser Island did not finally cease until 1991.

We had traveled to Hervey Bay to visit this unique island of sand. A regular bus collected us from our hotel early one July morning in 1997 for the brief trip to the Urangan boat harbor ($25^{\circ}17.77'S$, $152^{\circ}54.56'E$). There, along with the four wheel drive bus that was to provide our transportation for the rest of the day, we boarded the ferry for the brief voyage to Fraser Island.

The ferry, built just like a landing craft, headed north before turning east and approaching the beach at a place on the west coast of Fraser Island just north of Moon Point (about $25^{\circ}12.42'S$, $153^{\circ}0.40'E$). There the ferry simply lowered its ramp onto the soft sand beach and the 4WD bus drove down the ramp onto the beach and across it into the scrub forest. We followed on foot and boarded the bus for the cross-island drive.

The sandy road was rutted by regular traffic so the bus bumped and lurched its way along, first across flat terrain coated with strange and wonderful scrub. Gradually the forest thickened with larger and larger trees creating a canopy with a lush undergrowth below. Here the runoff from the high dunes to the east has created a network of crystal streams and clear-water lakes edged with the purest sand. It is the absence of earth and mud that makes this land so strange, so magical. We passed through the Yidney Scrub, home to great stands of virgin Kauri pine, the trees so sought after by the ship-builders for their resistance to



Left: The bus drives from the ferry onto the west coast beach of Fraser Island. Right: A sand goanna on the beach at Lake Garawongera.

marine life. We took a short side trip to visit Lake Garawongera ($25^{\circ}19.80'S$, $153^{\circ}9.58'E$), one of those pristine lakes. A sand goanna was primping itself on the lovely beach when we arrived and only reluctantly decided that the crowd was more than it could tolerate. Our guide recommended that we wash our gold jewelry in the sand by the edge of the lake and the luster of Doreen's gold ring did seem to rise. Back in the bus we drove the last of the 15 miles from our landing beach at Moon Point to Happy Valley ($25^{\circ}20.28'S$, $153^{\circ}12.04'E$), a rustic resort close to the great eastern beach where signs strongly discourage feeding the dingoes who have become persistent pests. There we lunched in the open-air restaurant.

Refreshed, we mounted our 4WD wagon for the afternoon tour. The bus made its way onto the packed sand of the great 75-mile beach and we were soon sailing smoothly along toward the north in a style in stark contrast to the morning's bump and grind. In no time we covered the 4 miles to where a substantial stream, Eli Creek, empties into the ocean ($25^{\circ}17.78'S$, $153^{\circ}13.34'E$). A delightful trail meanders inland alongside Eli Creek, allowing one to enjoy the lush tropical forest of banksia and pandanus trees fed by the water of the creek. But the crystal stream devoid of any mud or rocks allows an even more delightful experience, namely a swim down the last half mile or so of creek. With only fine sand on the stream bed there was no danger of scraped knees or toes despite the shallow depths. The sparkling clear water and the lush foliage made this a quite unique experience. I could not resist a second descent.

A couple of miles further north we came to the wreck of the "Maheno" ($25^{\circ}16.03'S$, $153^{\circ}14.31'E$), a rusty skeleton lying partly buried in the 75-mile beach. More than 50 vessels have foundered on the shores of Fraser Island; indeed the wreckage became of such concern that, in 1870, a lighthouse was constructed at Cape Sandy on the northern tip of the island. But even with the lighthouse, wrecks still occurred. Today, the most visible is the "Maheno", a former luxury liner and World War I hospital ship. In 1935, it was being towed to a scrap yard in Japan when it was blown ashore in a storm. To add to the indignities, it was used for target practice during World War II. Further along the beach, some three miles north of Waddy Point, an Italian luxury yacht, the "Marloo", became beached in 1914 after encountering rough currents on Sandy Cape Shoal. It now lies beneath the surface of the water where it is a favorite



Left: The wreck of the "Maheno". Right: The terminal for Air Fraser Island.

dive site.

As we were inspecting the “Maheno” we were amazed to see two light planes approach and land on the beach just a few yards from where we were standing. The pilots disembarked and approached the crowds around the “Maheno”. It transpired that they were seeking passengers for “Air Fraser Island” and offering a brief aerial tour of the island. I could not resist and soon, along with two other passengers, I was roaring along the beach in a Cessna flown by a wizened bush pilot, reputedly the best in the world. No sooner were we aloft than we veered over the ocean looking for sharks. Many seemed to be lazily patrolling the shoreline perhaps seeking Eli Creek descendents who had failed to stop at the beach! Then we turned inland for a close aerial view of the Knifeblade sandblow, one of those great moving dunes that had built the island. Further west we had a good look at the inland lakes and streams before turning for home. It was a special thrill to sweep down and land on the beach, the surf almost within arm’s reach.

But the hours of daylight were dwindling and after a brief stop to see the rain-sculpted cliffs known as “The Pinnacles” we began the long drive back across to the west side of the island. There the ferry was beached, ready and waiting for the bus to cross the sand and drive up the ramp. Soon we were chugging back to Urangan boat harbor. It had been a special day on a unique island, a naturally crystal place of bright sand, sun and surf. I felt like an interloper, especially in the great 4WD Mercedes bus. Maybe only people on foot should be allowed there. But that would be to deny so many a glimpse into another, different and pristine world.

Chapter 16

ON THE PEAK OF THE RISING SUN

*“He who climbs Fuji-san once is a wise man,
he who climbs it twice is a fool.”*

Popular Japanese saying.

And so it was that, some four years later, I took a taxi to the Kyoto Central Station and was soon speeding along at close to 160mph on the shinkansen bound for Fuji City, about 200 miles to the east. The Kodama or limited express (for Japanese trains of various degrees of expressness are given useful identifiers) arrived exactly on time at 10.52am at Shin-Fuji station. There I was met by my friend Yoshi Tsujimoto and one of his students, Masayuki Tanada, who had promised to carry both of us oldies to the summit of Fuji. Or so we teased him; in reality he was the very essence of quiet civility.

From Shin-Fuji station it is an increasingly tortuous drive of some two hours through the town of Fujinomiya and up the lower slopes of Mount Fuji. You start in the typically dense built-up area around Fuji City and Fujinomiya and rise gently through crowded, rolling farmland. Soon, however, this gives way to dense semi-tropical Japanese forest of low trees and a thick ground-covering of bamboo. Higher up this forest begins to change with increasing numbers of larger pine trees and a thinning of the bamboo. Eventually the bamboo disappears completely to leave an attractive highland forest of firs.

Our goal was the highest point reachable by road on the south side of Fuji, namely the mountain station of Shin-go-gome (“new fifth station”), high on the steep sides of the great volcano. By way of background, know that Fuji is a sacred mountain topped by a shrine. Pilgrims who begin at the base of the mountain are aided by ten stations roughly equidistant along the climb to the top. There are several routes up the mountain each with its own chain of ten

stations. However, these days most hikers with a less devotional objective, drive as far as they can up the mountain. Roads on the north side and on the south side climb to just over 7500ft where the fifth station, Go-gome, is located. The most popular route is up the Kawaguchi-ko trail from the Go-gome trailhead (7592ft) on the north side of the mountain. We followed the Fujinomiya trail that begins at Shin-go-gome (7874ft), the new fifth station, on the south side.

It was mid-afternoon before we reached the large parking area at Shin-go-gome and managed, somewhat fortuitously, to find a parking space. The weather had been very cloudy and misty as we drove up to this point and we had resigned ourselves to very limited visibility during the climb. But, as we readied our equipment in the parking lot, we began to catch glimpses of blue sky and sunshine above us. Buoyed in spirit we began our climb upwards from the crowded fifth station at about 2.00pm. It is only a short climb up to the sixth station, Roku-gome, the intervals between stations being quite irregular in places. The sixth station also coincides with the tree line so that the terrain from here on was everywhere volcanic rock strewn with ash and geologically recent ejecta. We made steady progress up the rough and worn trail. Soon we were in bright sunshine with an uninterrupted carpet of clouds below us. The famously regular shape of Fuji was evident as the sun cast its shadow on the parchment of the top of the clouds. But the bright sun also meant that we were soon sweltering in the heat. We could see Shichi-gome, the seventh station, above us and it seemed deceptively close. But it took a depressingly long time to get there and we were struggling when we arrived at 10,000ft and Shichi-gome about 4.00pm.

Our plan was to climb some distance during the daylight hours and then to find a place to stay the night so that we could climb the last part before dawn the next day. In doing so we would be following the traditional timetable for climbing Mount Fuji. The idea is to reach the summit in time to enjoy what the Japanese call “goraiko”, the semi-mystical experience of viewing the sunrise from the summit.

In theory it is possible to stay overnight in one of the many lodges on the mountain; almost all the stations have such a lodge. They consist of three or even four levels of wooden shelves installed in a moderate, single storey hut. Hundreds of hikers are packed in like sardines on these shelves equipped with heavy cover-blankets. As we were climbing toward Shichi-gome, we heard word that many of the lodges were closing or had already closed for the winter. Shichi-gome lodge still seemed open for business. But it was very small, already crowded and a very long way from the summit for a pre-dawn hike. We decided to risk our chances further up the mountain since we still had a couple of hours of daylight.

And so we pressed on. It was harder going now, both rougher and steeper. We had to pause quite often to get our breath in the rarefied air and so, though the large eighth station did not seem very high above us, it took a long time to reach it. At one rest stop, we had confirmation of the rumors we had heard further down the mountain. The lodge at the eighth station, Hachi-gome, was full; the proprietor could not pack another single soul into his establishment. This was depressing since we also had confirmation that all the higher lodges (mainly

those on the summit) were closed for the season. But almost immediately, we had some more encouraging news. Apparently, there was another Hachi-gome lodge just a short distance around the mountain. This was on one of the other, less popular trails; apparently it was still open and even had some space left for the night. And so we pressed on in a somewhat more encouraged mood. Light was already beginning to fade as we reached the large and full Hachi-gome lodge and trudged past onto the cross-mountain trail that would take us about a half-mile to the east. There, at 11,150ft, we found the other Hachi-gome and, with great relief, purchased three of the last available spaces. The fact that the cost was a highly inflated \$60 per person seemed of little consequence compared to the alternative.

And so we checked in to the Akaiwa Hachigome or “Eighth Stage Red Rock Lodge”. In its literature it advertises itself in these lyrical terms:

*You can be relaxed since it is not crowded.
You can enjoy the best sunrise from the room.
You can climb faster since the Gotemba trail is less crowded.
You can have as much curry and rice as you want for dinner.
Please enjoy wonderful Fuji with us. We are waiting for you.*

though, of course, in Japanese, not in English. A few of the other inmates, spoke a little English, but otherwise I had to rely almost exclusively on my friend Yoshi.

As in all Japanese dwellings, we took off our shoes in the entrance way, in this case a small, sunken open space inside the doorway. Then, in our stocking feet, we stepped up onto the lowest of the carpeted platforms. The last few spaces that we had felt fortunate to claim were on the third and highest platform, with just about three feet of headroom below the wooden roof. To reach our precious space, it was necessary to climb up onto the second platform, carefully choosing our footing to avoid stepping on sleeping bodies and then to crawl over more bodies to the roughly 6ft by 2ft space that each of us had been allotted. But it was warm, comfortable and clean. And there was a sense of camaraderie and of shared adventure that made the atmosphere friendly and hospitable.

After stowing our belongings, we climbed down again to enjoy the evening meal of curry and rice, prepared in two great iron pots bubbling over the stove in the sunken hallway. We washed it down with cups of hot tea and it tasted marvelous after our exertions of the day. Crowded around the three small and low tables set up to serve as a temporary eating area, conversation was inevitable. We met the three young Tokyo women who been allotted the very last places just after us and beside whom we would spend the night. I also had a publicly entertaining conversation with a very old Japanese woman who had somehow managed to climb this far despite her arthritis and her bent frame. Later Yoshi related to me what he remembered of the banter over the dinner table. The old lady was from Tokyo and was climbing Fuji to visit a temple in which the mummy of a monk is kept (unfortunately that temple was closed). She was also a vegetarian and claimed that all the confusion in today’s Japan



Left: On the slopes of Fuji. Right: Hachigome lodge.



Left: Hachigome lodge entrance. Right: In our sleeping spots.



Left: Sunrise. Right: On the summit of Fuji.

came from eating meat. She was the soul of the party and, since I was the first foreigner she had ever talked with, she had a number of observations on me and the circumstances that the crowd found very amusing. Though her wry comments were lost on me, I felt I knew her thoughts when she asked for my hand and gently stroked it. In that quite public moment, I had a strange sense of quiet humanity and peaceful compassion. Seconds later the feeling was gone and the amiable chatter resumed. Later, when the conversation ebbed, we retired to our assigned spaces on the shelves to try and get some sleep before our early morning start. But just before the room lights were extinguished, I was moved to glance down to where the old lady was sleeping by the door. There she lay curled up without mattress pad, bed cover or head rest.

We arose about 4.00am and made preparations for a pre-dawn departure. During our brief sleep, I and others had been awakened by the obvious distress of one of the other guests. He was having difficulty breathing and even the oxygen bottle that his friends had brought did not help very much. Eventually, the whole group dressed and left in order to get this man back down the mountain to medical attention. It was dramatic testimony to the effects that altitude (in this case 11,150ft) can have on some people. As we were rising, we discovered that Yoshi was also feeling some of the effects of the altitude including headache and nausea. He decided to remain in the lodge while Tanada and I went to the summit. It was cold and dark as we set out, now following the Gotemba trail. Most of the other guests had a similar plan; while a few left before us, most followed and, looking back, we could see a twinkling line of flashlights winding its way up the mountain. The trail is well traveled and therefore not difficult to follow in the dark; the main problem is the rough and loose footing that can cause an occasional stumble in the dark. It took about an hour for us to reach the torii gate that marks arrival at the crater rim at about 12,000ft. It was lightening fast and so, along with crowds of others, we found a good vantage point from which to await the 6.00am sunrise. The dawn was quite spectacular though too cold to stand and watch for long. Soon, we were off again, hiking around toward the west side of the crater rim aiming for the 12,385ft summit of Mount Fuji. Unfortunately, a most unsightly weather station has been built right on top of the summit; this is not only an eyesore but it also spoils that rich excitement normally experienced in reaching a raw, high peak. Nevertheless, it was a moment of accomplishment for I had been through many adventures since I first dreamed of climbing Mount Fuji. There seemed a rightness to the moment and a sense of completion, of closure. There would be other dreams and other trials but they would be part of later chapters.

In the annals of the vulcanologists, Fuji is a young volcano whose most ancient lava is only 8000 years old. It has been dormant for almost 300 years, the last eruption in 1707 occurring not in the impressive summit crater but much lower down on the southeast side of the mountain. This eruption produced a still-recognizable crater and a side cone known as Hoei-san that we would later pass during our descent. Though dormant recently, Fuji has been very active during the historical period; for example, 18 eruptions were recorded during the period from 781AD to 1707AD. Despite its recent inactivity, the crater at



Summit and crater of Fuji.

the summit is still an impressive 300ft deep and almost half-a-mile across. Its interior walls are almost everywhere vertical and are highlighted by slashes of the stark volcanic colors, red, yellow and black.

There are other, less obnoxious buildings on the summit. The ancients clearly had a more refined sense for they built their shrine in a discreet and unobtrusive site on the rim opposite the summit. Indeed, the Japanese records tell of pilgrimages to the summit over a thousand years ago. The earliest recorded ascent was in the 870s and shrines were built near the summit in the 1100s. Today the Sengen shrine, where the cherry blossom is worshiped, is a most ecumenical establishment, tending to the needs of climbers from all around the world. Established climbing routes to the summit were first created by monks of the Shugendo sect. Initially, the most popular route was the one that we followed; it starts far below at a shrine in Fujinomiya. The stations and lodges appeared about 1430, first on the Fujinomiya trail and later, in the 1600s, on the most popular route today, namely that on the north side. Until about 100 years ago, only monks and priests climbed Fuji; indeed women were forbidden to do so until 1872. Now, during the official, open season in July and August nearly 200,000 people set off for the summit. On busy weekends, this can mean an almost continuous queue of people on the most popular trails.

One of the popular rituals is to purchase a wooden staff or “kongozue” and have it branded with the name of each station that you visit. All of the stations feature a brazier and branding irons for this purpose. A long queue of people were waiting at the Sengen Shrine on the summit for that particularly sought-after brand. Despite the queue, the shrine is a dignified and busy place; only the NTT telephone is incongruous.

After circling the crater, we began our descent and made rapid progress

down the Gotemba trail by which we had ascended in the pre-dawn hour. Only one incident of note occurred. About 500ft above the Akaiwa Hachi-gome lodge, we encountered the last of the previous night's guests, making very slow but steady progress up the mountain. It was the old lady using two canes to aid her balance on the rough trail. She seemed oblivious to our approach, intent on the effort required to labor up the steep slope in the morning sun. I thought for a moment of breaking into that reverie, but then realized I could not communicate with her at all without Yoshi. And so I just stood to the side as she inched her way slowly and silently by. No special feeling accompanied that moment, only a sense of loneliness and sadness. I stood wondering why she was so determined on climbing Fuji and on doing so alone. In her traditional Japanese clothes and thongs, she seemed to be from a different age and place than the middle-aged, affluent and meticulously-equipped women who were part of many of the groups of hikers we encountered. I still think of that old woman, wishing that I had made more of an effort to understand her, her unquenchable spirit and the feelings she invoked in me.

Back at the Hachi-gome lodge we found Yoshi much revived. This very day the lodge was closing for the season and the owners were busy packing their equipment and installing the shutters that would protect it from the winter storms. After breakfast, we resumed our descent, having decided to take a different route over this last leg. Thus we hiked down to the Shichi-gome lodge on the Gotemba trail and there forked right to circle the Hoei-san crater. For the next couple of miles, the steep trail was composed of deep and loose sand/gravel known as "sunabashiri". This allows for a quite novel and rapid mode of descent, a cross between skiing and running, in which one can safely take large sliding steps much as one would on a sand-dune. It also provides fascinating views of the Hoei-san crater itself and its interesting combination of vertical striations of solid rock and slopes of sunabashiri. We kept to the right fork at each trail junction and circled down along the inside of the crater, eventually arriving at its base. From there it was a short hike along the cross-mountain trail back to Shin-go-gome and the car. Without much delay, we packed up and drove down the mountain to the Shin-Fuji station where I caught the shinkansen bound for Tokyo and Yoshi and Tanada began the long drive back to Osaka.

As I had imagined, it had not been a particularly difficult or scenic hike. Rather it had been an intriguing cultural experience, highlighted by my brief encounter with an old lady from a very different time and culture. In the days that followed I retained an eerie memory of that encounter and yearned to know what happened to her on the slopes of Fuji. I fervently hope she made it down safely.

Chapter 17

ZION NARROWS

“The Indians call the canyon through which it runs, Mukun’tuweap, or Straight, Canyon. Entering this, we have to wade up the stream; often the water fills the entire channel, and although we travel many miles, we find no flood plain, talus, or broken piles of rock at the foot of the cliff. The walls have smooth, plain faces, and are everywhere very regular and very vertical for a thousand feet or more ...”

From “Canyons of the Colorado” by John Wesley Powell.

The North Fork of the Virgin River begins high on the 7000-8000ft Markagunt Plateau in southwestern Utah, about a hundred miles north of the Grand Canyon. In these early reaches there is little that distinguishes it from hundreds of other streams that gather water from the summer thunderstorms and the winter snow melt and help irrigate the rolling hills, meadows and forests of the sparsely populated, open sky country of that high plateau. The spectacular nature of the North Fork only becomes apparent if you follow it to the edge of the plateau, where it has carved a chasm 2000ft deep into the Markagunt and created the truly spectacular canyons of Zion National Park. For about 16 meandering miles that chasm is an incredibly narrow “slot” canyon, in places only 20 to 30ft wide with vertical walls rising out of sight on both sides. Later it broadens to form the wider, yet still awesomely vertical canyon visited by those who drive up from the south entrance to see Zion National Park by automobile. But to really experience the magnificence of the North Fork of the Virgin, you must venture into the narrow, storm-sculpted sandstone gorge they call the Zion Narrows. With its raging rapids, its soaring, fluted walls and hanging grottoes it is a rare and awesome place.

The best way to make this pilgrimage is to begin high up on the Markagunt Plateau, north and east of the Park, and to follow the river all the way down through the Narrows to the point where it emerges into the broader canyon of Zion National Park. Though it is marginally possible to accomplish this in

one very long day hike, it is clearly preferable to overnight in the canyon. This requires a permit from the Park Service and the allocation of one of the ten small campsites that are located along a central stretch of the canyon where there are occasional spots of accessible high ground.

There is, of course, danger involved in that adventure for the storms that sculpted the Zion Narrows still occur and the slot canyons still focus the runoff and create raging flash floods that crash through the canyon sweeping all before them. The bare rock of much of the surrounding land does not absorb much water and the steepness of the terrain accelerates the runoff. Worse still, there are miles of canyon in which there is little or no accessible high ground where hikers can seek refuge from these floods. The Park service posts stern warnings about this danger and issues flash flood alerts but these efforts cannot eliminate the risk. During a flash flood the water level rises almost instantaneously - within minutes or even seconds. The hiker must not only find high ground in any local rainstorm but must also be aware of the flood potential of quite distance storms. Thus he or she must be alert to the other signs of a possible flash flood such as rapid increase in the muddiness of the water or the roar from the upstream flow. Because of the danger in the Zion Narrows, the Park Service does not issue permits to hikers until the day before the intended hike and suspends the process when thunderstorms are imminent.

A second, less obvious danger in this adventure is the possibility of hypothermia. For more than half of the length of the hike, there is no alternative but to hike in the river itself. While this is usually no more than about a foot deep, there are places where it is necessary to wade through chest deep pools and once or twice you must swim. This means that the hiker is wet for a substantial fraction of the time ("wicking" clothing of polyester or similar material is essential) and, since the sun does not penetrate the depths of the Narrows very often, prolonged coldness can lead to serious hypothermia even in mid-summer. At other times of the year, a wetsuit is essential.

One July day in 1998, I set off to hike the Zion Narrows with Troy Sette, Clancy Rowley and John Lim. Troy and Clancy were veterans of adventure hikes in southern California and the Sierra Nevada; John was a relative novice. I left home the week before to do some hiking elsewhere in Nevada and Utah. On Monday, July 27, I was high up on the summit of 11,918ft Charleston Peak in southwestern Nevada when I witnessed a very violent thunderstorm on the eastern horizon. The lightning of this storm flashed across the distant sky with an intensity that frightened me off the summit. But I thought little more about this common summer occurrence in the southwest until I arrived in Zion National Park some three days later, on the afternoon of Thursday, July 30. As the advance party, I had volunteered to reach Zion early in order to secure the permit from the Visitor Center in Zion National Park and to set up camp. I planned to obtain the permit for our Saturday departure, first thing on Friday morning. However, when I arrived at the Visitor Center on Thursday evening, it was disconcerting to find the following cutting from the Salt Lake Tribune prominently displayed on the notice board:

The Salt Lake Tribune, Wednesday, July 29, 1998:

Hikers Find Body Floating In Virgin River

Hikers in Zion National Park discovered the body of an apparent drowning victim floating along the north fork of the Virgin River on Monday night. Officials believe the man had been hiking in the southwest Utah park along the Narrows, a canyon through which the north fork of the river runs, when he was swept away by swift currents caused by a flash flood Monday afternoon. About 14 hikers, stranded by the flood, saw the body floating down the river and recovered it Monday evening. Early Tuesday morning, the group was able to hike out of the area and told a park ranger about the body, said Denny Davies, a park spokesman. The National Park Service Search and Rescue squad carried the body out Tuesday, but investigators were unable to immediately identify the man. "There was no identification on the man, and we haven't heard any reports about a missing person," Davies said. Washington County Sheriff Glenwood Humphries said the body had been badly beaten by rocks in the river. The man is described as a male in his 40s between 230 and 250 pounds.

Davies said the north fork of the Virgin River rose about three feet due to the torrential rains that hit the area Monday afternoon. He estimated the river flows increased from 110 cubic feet per second to 740 cubic feet per second by 7:30p.m. The Narrows was named because the canyon narrows to between 20 and 25 feet in some areas. Park rangers have warned it is dangerous to hike in the area when flood potential is high in July and August. "Because the canyon is so narrow, there are not a whole lot of escape routes when there is a flash flood," Davies said. National Weather Service meteorologist Bill Alder said Zion National Park headquarters received .47 inches of rain late Monday afternoon, while Lava Point area, just west of the Narrows, received about .37 inches.

The Salt Lake Tribune, Thursday, July 30, 1998:

Second Body Pulled From Virgin River

Searchers pulled the body of a second California man from the north fork of the Virgin River in Zion National Park Wednesday where a flash flood apparently swept both men to their deaths. The body of Ramsey E. Algan, 27, Long Beach, Calif., was located Monday evening by several stranded hikers. The group was able to hike out the next day and alert park rangers. Wednesday morning, about 1 1/2 miles upstream, the body of Algan's hiking partner, Paul Garcia, 31,

Paramount, Calif., was found by search and rescue workers. Both men had apparently been hiking along the Narrows, a slot canyon in which the north fork of the river runs, when they were swept away by swift currents caused by a flash flood Monday afternoon. Officials had no idea that Algan had a hiking companion until late Tuesday night when officials found the victim's car, said Denny Davies, park spokesman. "Rangers found an unlocked car with two wallets inside, which contained both men's identification," he said. Later, other hikers who had been in the Narrows and survived identified Algan from his license photo. The same hikers also said another man who fit the description of Garcia was with Algan before the rainstorm hit. A search was initiated Wednesday at 11:20 a.m. The body was caught in the river's debris, Davies said. He said the north fork of the Virgin River rose about 3 feet due to torrential rains Monday afternoon. He estimated the river flows increased from 110 cubic feet per second (CPS) to 740 CPS later that night. National Weather Service meteorologist Bill Alder said Zion National Park headquarters received .47 inches of rain late Monday afternoon, while Lava Point area, just west of the Narrows, received about .37 inches.

The Zion Narrows route is a rugged 16-mile hike in a narrow canyon 800 to 1,000ft deep. About half the hike is through the river itself. Park Managers have cautioned people that they should avoid hiking when the flood potential is high, especially during July and August. Hikers are also strongly urged to get updated weather information in any narrow or slot canyon, particularly when afternoon thunderstorms threaten. "We cannot stress too strongly that visitors need to heed these flash flood warnings and plan alternate trips that don't include slot canyons," said acting superintendent Eddie Lopez. These are the first fatalities in Zion National Park this year. Alder said since 1950, there have been 22 flash flood fatalities in Utah.

I suspect that these press clippings and the whispered conversations they produced resulted in the very short queue for permits when the Visitor Center opened at 8.00am the following morning. I was second in line behind two men and a woman who had hiked the Narrows the previous year and were returning to do so again. That was reassuring. Behind me came several men bound for the other popular wilderness hike known as "the Subway", followed by an easterner called Neal Litman who intended to hike the Narrows with his wife and two children. That sounded a dubious proposition to me and subsequent events were to confirm this instinct. But at the time I was too intent on our own plans to dwell on the intentions of others. When my turn came, I was duly warned of all the dangers, told where I could park and where I could not and was issued a permit for the Zion Narrows hike. In the process, I was allocated one of the twelve numbered campsites in the Narrows and chose Number 7, Boulder Camp. Late that evening, Troy, Clancy and John arrived and we were ready for our Zion adventure.

We arose at dawn the next morning and sorted out our equipment, trying in the process to minimize our backpacks while ensuring that we were equipped for all eventualities. Since the weather forecast indicated little chance of rain (and therefore the posted flash flood warning was low) we decided not to carry a tent but to rely on a large ground sheet for emergency cover. Preparations complete we set off up the road into Zion Canyon. That road ends at a spectacular amphitheater known as the Temple of Sinawava, a busy and popular place for visitors to the National Park. Many of these tourists park and then walk along the asphalt trail called the Riverside Walk that penetrates another mile into the Virgin River Narrows. The trail ends where the river fills the canyon, but many of the more adventurous wade further upstream, some for several miles to the truly awesome section of the Narrows.

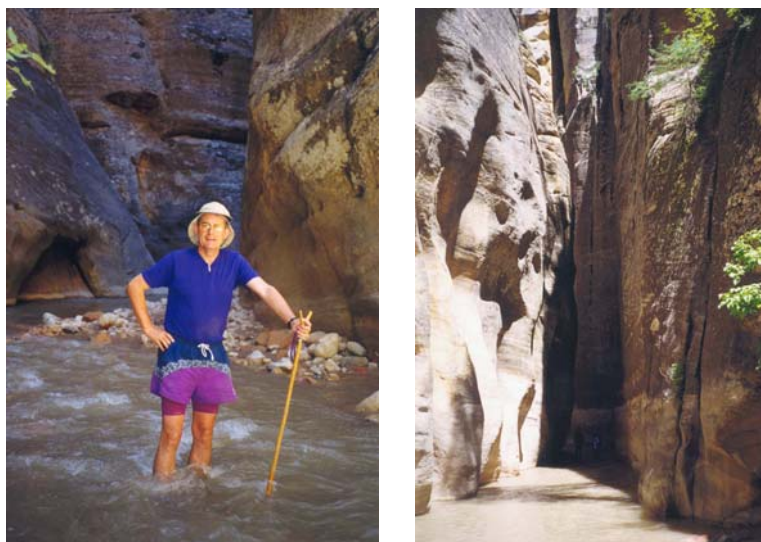
But we had a more ambitious objective and therefore, after parking and securing my Mitsubishi Montero near the Temple of Sinawava, we loaded all our packs into Troy's Nissan Pathfinder and headed back down the Zion Canyon Road. At a road junction in the Park we turned left and headed eastwards bound for the trailhead in Chamberlain's Ranch on the Markagunt Plateau to the north and east of Zion National Park. This 1.5 hour drive begins as the spectacular Zion-Mt.Carmel Highway climbs the east wall of the Zion Canyon before exiting the Park. About 2.5 miles beyond the East Entrance to the Park, we turned north on a paved road that changes to dirt after several miles. The road winds its way across the plateau and then descends to cross the Orderville River, climbing again and cresting a ridge before descending to a bridge that crosses the North Fork of the Virgin River. The distance from the main highway to this bridge is about 18 miles. The dirt road turns right after the bridge, but we turned left and, after 0.25 miles arrived at the gate to Chamberlain's Ranch. The owners are kind enough to let hikers pass through as long as they are careful to close the gate behind them. After this, it is another 0.5 miles to a rough parking area at the trailhead situated just before the road fords the river.

It was a beautiful, crystal clear day on the high plateau and our spirits soared with the expectations of a new adventure. The remote ranch land on which we found ourselves was delightfully bucolic, a gentle river valley with a stream and rolling pastures surrounded by low, tree-covered ridges. Soon we were ready and strolled easily along the rough dirt road as it paralleled the North Fork on the route westwards. About 50min from the start we passed an old wooden structure, Bullock's Cabin that may have once served as home to some proud pioneer but had long since been converted to a shelter for the ranch cattle. Soon the pasture land and the road ended and the valley sides began to close in as the Virgin River cut more deeply into the Markagunt Plateau. This stretch provided a beautiful and serene hike on a lovely summer day. A well-worn use trail made progress easy though the river crossings increased in frequency and difficulty.

Two and a half hours from the trailhead we heard voices ahead of us and soon came upon Neal and Kathy Litman and their children, Jackie (aged 11) and Ben (aged 8). They were enjoying a rest beside the stream. Having taken the 6.30am shuttle bus from Zion Lodge to the trailhead, they had started hiking



Left: Bullock's Cabin. Right: Upper Canyon.



Left: Entering First Narrows. Right: First Narrows.

about an hour before us. They seemed to be enjoying the surroundings as much as we were though Neal's apparent difficulty with his water filter was a worrying omen. Experience had taught us the critical importance of water filters in the deserts of the southwest and so we carried at least two. We learned that the Litmans were from the east coast and that they had been planning this trip west for a long time. I wasn't at all sure that they realized the magnitude and lack of forgiveness of the western wildernesses. I suspected that it would not be the last we saw of them; I learned that they were bound for Camp 9 and made a mental note to make sure they passed our Camp 7 later that day.

Soon the walls became vertical and the valley was transformed into a classical "slot" canyon with fantastic sculptured walls and cool grottoes. Three hours

from the trailhead, we found a very pleasant, sunny bench for our lunch stop and, in no hurry, took some additional lazy time to enjoy the marvelous surroundings. As we did Neal and Kathy and the kids repassed us moving at a good pace. Clearly they were practiced hikers even though they were now in a new and different land. So, when we resumed our hike at a leisurely speed they kept pace with us. Shortly thereafter (3.5hrs from the trailhead) the width between the walls closed in so that, in places, they were as close as 20ft. We had arrived at the first narrows. Experience in other canyoneering adventures had taught us that such narrowing was almost always accompanied by waterfalls and places where progress downstream required climbing. But, with a few modest exceptions, this was not the case in this Zion canyon. For much of the way, the river occupied most of the width of the canyon bottom and the sediment carried by its frequent flash floods is apparently sufficient to even out the longitudinal grade to one that only produced small cascades. Even these seemed temporary having been formed by logjams.

About 5hr from the start we came across just such a logjam that was easily climbed. It was somewhat disconcerting that Neal and Kathy were initially somewhat intimidated by this obstacle that seemed a minor one to us. Perhaps it was the pool downstream of the jam that alarmed them since, given the murkiness of the water, it was not possible to tell how deep the pool was ahead of time. They seemed reassured when we helped escort the kids through this obstacle.

Just a short distance downstream we came upon the only substantial waterfall on this hike, a vertical drop of about 15ft in a very narrow section. Fortunately, a crack in the rock off to the left provided an easy passage around this otherwise difficult hurdle. By now it was becoming apparent that the experience Troy and I had acquired navigating routes down wilderness canyons was going to be valuable to the whole group and that without such experience, the hike would be much more difficult and time-consuming. So we naturally fell into a mode in which Troy and I would take turns leading the group and exploring ahead for the best route through the boulder-strewn cascades and the deep pools.

It was about this time in mid-afternoon, that I began to notice John falling behind us despite the slow pace set by the Litman family. Soon it was evident that John's lack of hiking experience was going to be a problem. Despite his youth and his soccer-playing fitness, his legs, unused to travel over such rough terrain, were giving him considerable difficulty. Indeed, his pace slowed so dramatically that the Litman family began to pull ahead of us and we had to relieve John of his backpack. Troy and Clancy carried most of the added burden. We fashioned two walking sticks for John and treated his pain with Motrin. In this adjusted mode we soon caught up with the Litman family again. I had no doubt that Troy, Clancy and I would make it through the Zion Narrows; however, I was beginning to wonder if we could carry all the others with us.

Shortly after the waterfall, we came upon the woman and two men who had been in front of me in the Visitor Center queue and who had traveled on the 6.30am shuttle with the Litmans. Having come this way before, they

seemed relaxed and comfortable. Together we arrived at the readily recognized junction where Deep Creek joins the North Fork from the right. We paused at the relatively broad beach in the middle of this cathedral-like junction, towering vertical walls on all sides. Just upstream of this point we had swum through a deep pool and so we needed a moment to warm up especially since the light and the warmth in this deep recess had already begun to wane at the end of the day. It was now 6.5hr since we had set out from the trailhead.

Deep Creek has a significantly larger volume flow rate than the North Fork and so the river downstream of the junction is notably deeper and harder to hike through. By now both John and the Litman kids were beginning to show signs of serious distress. However, the goal for the day was within striking distance. The numbered campsites begin at the Deep Creek junction. Number 1 lay in a slight rise just to the south and we could count our way down as we approached our assigned spot. About 40min later we passed the junction where Kolob Creek enters from the right and just a few minutes later arrived at our campsite, Number 7 or "Boulder Camp." Unlike some of the earlier camps that did not seem high enough above the river for comfort, Boulder Camp was up a wooded slope, a reassuring 20ft or more above the river. A very comfortable site, it also included a large overhanging rock that would provide ample shelter in case of rain. A deer was sitting only yards from our site and seemed quite undisturbed by our presence. In addition to the small flat area intended as Number 7, there was another cleared area just a few yards away. When the Litmans struggled by a few minutes later, I suggested that they should stop at this ancillary campsite instead of continuing on to Number 9. They jumped at the chance to spent the night close to us.

Thus we all prepared for the night at Boulder Camp. We spread our lightweight tarp out under the overhang and were therefore well prepared for any change in the weather though none seemed likely. Our sleeping bags would keep us plenty warm. On the other hand the Litmans had chosen to bring a tent but no sleeping bags, fearing rain more than cold. I think they spent a miserable night huddled together in their tent. We were able to help them with our water filter and gave the kids some snacks. Indeed the kids seemed to gravitate toward our camp, drawn perhaps by the sense of security generated by our confident demeanor. Except, of course, for John though he was recovering a little with rest and food. We ate much spaghetti followed by fruit, other snacks and, needless to say, hot chocolate. Thus warmed, we slept well in that deep recess in the earth.

Shortly after sunrise the next morning, we had eaten breakfast and packed up ready to resume our adventure. The family had little left to eat and so I gave each of the kids a poptart and cheered them along. We left camp as a group about 7.00am. Downstream of Boulder Camp the canyon becomes quite rugged. Regular stretches of white water required a practiced eye for navigation so Troy and I took turns leading the pack. We passed each of the other numbered camps, encountering in Number 10 ("Alcove") yet another struggling hiker, a young man with a badly sprained ankle. But we had more than enough on our hands and he had a number of companions to help him. So we did not

volunteer any help. Finally we passed Number 12 ("High Camp") and, 300yds later arrived at Big Springs, a notable feature in which a very substantial stream issues from springs in the right canyon wall. Ferns and other greenery adorn these springs and make it a pleasant place to stop. We reached Big Springs about 1hr 30min after our morning start.

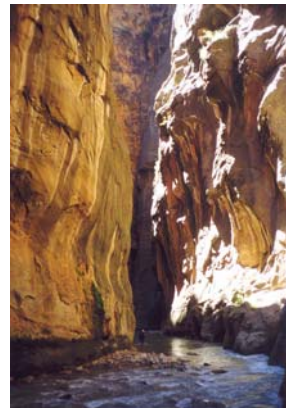
Up to this point, though the towering walls soared over 2000ft above us on all sides, there were still occasional places where the canyon widened and small, sloping benches of trees and ferns were scattered along the sides of the river. Often these provided the easiest route of passage downstream. More importantly, they would serve as refuge in the event of thunderstorms or flash floods. Indeed, like all the other overnight sites, Boulder Camp had been situated on such a sloping, wooded bench. However, downstream of Big Springs, the canyon walls close in even further and the river and its gravel beds fill the entire width of the slot. For more than three miles there are no benches on either side. No greenery, no refuge, and no sunlight except for a few minutes around noon. Just awesome vertical walls, running water and the gravel it carries with it. Even in mid-summer when the desert high above boils in the midday sun, down here in the depths of the Zion Narrows it is cold and wet and you must keep moving to prevent hypothermia.

We left Big Springs as a group a little before 9.00am and began our passage through this most dramatic section of the Zion Narrows. Because the risk of unexpected thunderstorms and flash floods is least during the morning hours we felt comfortable with our timing, especially since we could make out a strip of clear blue sky high above us. Both John and the children were already beginning to show signs of weakness and cold and so we kept moving at a brisk pace. Inevitably though, Troy or I would find ourselves far ahead of the pack and have to pause to allow them to catch us. Clancy, Troy and, to a lesser degree, myself were still carrying all of John's pack as well as helping the children with the deep wades and few swims. But, above all, it was a truly awesome place and the memory of that majesty will always be with me.

It took a little over 2hrs to travel through the heart of the Zion Narrows. In all that time, we had no direct sunlight. But, just upstream of the junction with Orderville Canyon, the Narrows widen a fraction and, on the inside of a left-hand turn, we came to a marvelous sunlight beach where we stopped to warm ourselves, to rest and to snack. John was really struggling on his two walking sticks and limped onto this beach about 10min behind the rest. The children already seemed rejuvenated by the sun. A few minutes later, we encountered the first hikers coming upstream from the Temple of Sinawava; they had set out early that morning to explore the Narrows from below. That was heartening for it meant that we had only a little over 2hrs of hiking ahead of us. More disconcertingly, a young man and woman came downstream and voiced concern about people they had encountered the previous day. Those people had started late because they rode from Zion Lodge to Chamberlain's Ranch on the 9.30am bus. Two of these people, it was reported, had balked at the log jam like the Litmans. Moreover, they had not shown up at their campsite in the evening. The young couple wanted us to report this to the rangers.



Left: Waterfall. Right: Near Deep Creek junction.



Left: Big Springs. Right: Zion Narrows.

Consulting privately later, Troy and I decided that there was insufficient cause for alarm. Surely, changes of plans like this must happen every day; most of the hikers we encountered had seemed unprepared for the ruggedness of this western wilderness. It was perfectly possible to hike back to Chamberlain's Ranch from the location of the logjam.

About 11.20am we left our sunny beach and plunged again into the shade of the Narrows. Almost immediately we encountered the junction with Orderville Canyon, a narrow slot entering on the right. The previous day we had crossed the upper reaches of Orderville on our drive to Chamberlain's Ranch and the descent of Orderville Canyon is another adventure to which would return. So I was not inclined to explore upstream into Orderville but pressed on downstream. Shortly thereafter, Troy, Clancy and I conferred. Since, more and more people were appearing from downstream and help would be available if needed, we decided that Troy and I would press on ahead leaving Clancy to accompany

John and the Litmans at their pace. This would allow Troy and I to drive back to Chamberlain's Ranch to collect Troy's vehicle.

A short distance downstream of Orderville junction, the canyon broadens a little and the wooded benches appear again. Sunlight penetrates and it is a beautiful hike downstream to the point where the concrete Riverside Walk ends. Now there were crowds of people enjoying the canyon and the adventure of a short hike up into this wilderness. The sun and the beauty stirred my soul and my bones and the pack seemed to lighten on my back as I walked that last mile behind Troy. When we reached the Riverside Walk at 12.20pm we shook hands, communicating our shared pleasure in another marvelous adventure.

We drove uneventfully to Chamberlain's Ranch and there parted company. I was bound for the east to hike in Bryce Canyon. Troy drove back into Zion to collect Clancy and John at the Temple of Sinawava. I was only later to confirm that all ended well for both John and the Litmans. But I often wonder if either realized how narrow their margin of safety had been during those days in the Zion Narrows.....

Chapter 18

RUBIO CANYON

“The long awaited, highly publicized grand opening took place on July 4, 1893. More than 400 passengers made the round trip that first day to the strains of “Nearer My God to Thee” Persons crowding the Rubio Pavilion platform stood in reverent silence as the chariot with the musicians aboard slowly ascended toward the distant skyline ...”

From “The San Gabriels” by John W. Robinson.

Rubio Canyon is a steep and virtually impenetrable narrow canyon which descends the steep southern slopes of the San Gabriel Mountains into Altadena, California. Before the coming of the Europeans it probably saw little of the local native Americans; they were afraid to enter the small, narrow canyons because of the possibility of confronting a bear. But in 1867, a Mexican immigrant, Jesus Rubio, began farming near the mouth of the canyon, using the small but regular stream that emerged from it to water his land claim. Jesus moved east in 1877 and the land was bought by a Dr. Hall and later, in 1880, by the Woodbury brothers. They began to develop the property and constructed a pipeline down the canyon to bring water from higher up. In doing so they formed the Rubio Canyon Land and Water Company (RCLWC) that survives to this day.

In the early 1890s, the entrepreneur “Professor” Thaddeus Lowe had grand plans for the San Gabriel foothills above Altadena. These involved various railways and resorts along a route to Mount Wilson, though this final destination was to elude him. In April 1892, Lowe and his engineer, David Macpherson, began to put their plan into action and, having obtained a right of way from the Woodburys and the RCLWC, they laid trolley lines from Lake Avenue in Altadena up into Rubio Canyon to the point where the Incline Railway Terminus would be located. The Incline Cable Railway from this terminus up to Echo Mountain was completed by July 4, 1893, a remarkable feat we would be unable to match today. At the Terminus where passengers disembarked from

the trolleys and boarded the Incline Railway for the ride up to Echo Mountain, Lowe constructed an elegant resort building known as the Rubio Pavilion.

Thaddeus Lowe's resorts on Echo Mountain and at the Alpine Tavern (a further trolley ride up to Mount Lowe from Echo Mountain) are well-known and documented. Today, hikers on the Mount Wilson Toll Road can read about these engineering exploits on explanatory markers placed along that road. Rubio Pavilion is less well known because the site is more remote. Built on a wooden trestle spanning the canyon, the original Pavilion was a substantial two-storey structure containing a hotel, a restaurant and, on the first floor, a large dance hall. The dance hall became a particular favorite with the local population and it was the scene of a number of grand social events.

A wooden walkway was also constructed leading up Rubio Canyon so that sightseers could enjoy the many beautiful waterfalls just a short distance upstream of the Pavilion. This was a quite spectacular walk as the surviving photographs and postcards attest. Proceeding upstream one first surmounted several small waterfalls including a 15ft cascade called Bay Arbor Falls that can be fairly easily climbed today using footholds and a wire rope on the right side. Just about thirty yards further the sightseers would arrive at the first large waterfall that consisted of two substantial drops of 20ft and 30ft with a deep pool on the ledge in the middle. The ledge had a flat sand-covered extension on the right that made it a particularly attractive and discrete sun-bathing spot. The two falls were called Ribbon Rock and Moss Grotto and the surviving photographs show a fairly precarious wooden stairway climbing them on the left. Before the recent cataclysm, it was possible to climb a short way up the gully on the right and then access the top of these double falls by means of a rough trail that contoured back from the gully into the main canyon.

Just about twenty yards upstream of the lip of Moss Grotto/Ribbon Rock Falls was another set of double falls, this time with the single name of Grand Chasm Falls. These drops were 20ft and 40ft and, until recently, they could be climbed on the left though there was a dangerous exposure at one point. Above Grand Chasm Falls, Lowe constructed a small, masonry dam; this formed a narrow reservoir that he called Mirror Lake. The water from this pool was used to run a small hydroelectric generator that provided power to the Pavilion. But the walkway bridged Mirror Lake and continued upstream where the canyon became very narrow and precipitous. It ascended two more moderate 15-20ft falls called Suspended Boulder Falls and Roaring Rift Falls before reaching its terminus at the bottom of the magnificent 80ft Thalehaha Falls. In total the walkway had more than a thousand steps and, at night, it was turned into an enchanted kingdom by the addition of more than 2000 Japanese lanterns. It proved to be a spectacular attraction which drew tourists from all over the world. The postcards they sent home gained it national and international attention.

But the spectacular nature of the canyon was created by the violence nature would visit on it from time to time. Nature finally caught up with man's adornments one terrible day in February 1909. A severe thunderstorm caused a rock slide directly above the Rubio Pavilion. This brought boulders crashing down onto the canyon-spanning structure, destroying it and killing one occu-

pant. Things were never the same in Rubio Canyon. Eventually, a small transfer shed was built to provide shelter for the passengers transferring from the trolley to the Incline Railway. But Rubio Pavilion and its famous walkway to the waterfalls were to fade into history. The Incline Railway and the Echo Mountain Resort struggled on from one natural disaster to another until they, too, were finally abandoned in 1937. In Rubio Canyon the walkways were swept away early by flash floods and only those hikers agile enough to climb could visit the beautiful waterfalls. The only artifacts that would survive for any time were the more massive concrete foundations of the Pavilion, a few rusty iron anchors for the walkway buried in the rock walls and part of the masonry dam fronting Mirror Lake. But the grandeur of the waterfalls remained and generations of hikers came again and again to enjoy their raw beauty and to bathe in their pools.

When I brought my family to Pasadena in 1969, it was not long before I discovered the glory of the San Gabriel Mountains. Assigned to look after my two young daughters on Sunday afternoons, I would often take them on hikes and one of our more adventurous expeditions was to Rubio Canyon. There we would hike along the route of the trolley line to the site of Rubio Pavilion. Just downstream of the Pavilion site, the trail had been washed away but a large four-inch water pipe still spanned the gap. The rockface close to the pipe provided handholds to make the crossing reasonably safe but it was necessary to escorted my daughters across the pipe one at a time. Past the Pavilion site, the well-worn use-trail continued up the stream bed. The first waterfall presented no great danger or difficulty. I could let Dana and Kathy climb on their own for it was not high and I could easily catch them if they slipped. But then we would reach the bottom of Bay Arbor Falls and the danger here was more significant. And yet they loved the challenge and so I would attach a rope around each of them in turn and let them climb the right side while belaying them from above. I don't think Dana ever slipped. But Kathy did and I will never forget her dangling on the end of the rope as I lowered her to the ground below. Despite these challenges (or perhaps because of them) we often climbed Bay Arbor Falls so that we could get to the bottom of the spectacular Moss Grotto/Ribbon Rock Falls. This was usually the end point of the adventure though I do remember that once Dana and I climbed the left side of the lower falls (Moss Grotto) to the ledge in the middle. There we swam in the small, deep pool and lay in the sun on the sand. But the climb down was scary and so we never repeated that feat. We did access the small area up above Moss Grotto/Ribbon Rock Falls by climbing the gully on the right and taking the narrow trail that contoured back in the main canyon. But I had nightmares the night after that trip and so we did not repeat it. Other than these moments we had marvelous fun in Rubio Canyon and my daughters treasure those memories to this day. Soon I will take the next generation into what is left of Rubio Canyon. But those will be sadder excursions; it will not be same because of man's clumsiness and foolishness in the summer of 1998.

Early one Sunday morning in February, 1998, Troy and Susan Sette, Garrett Reisman and I drove to the top of Lake Avenue in Altadena, California and set



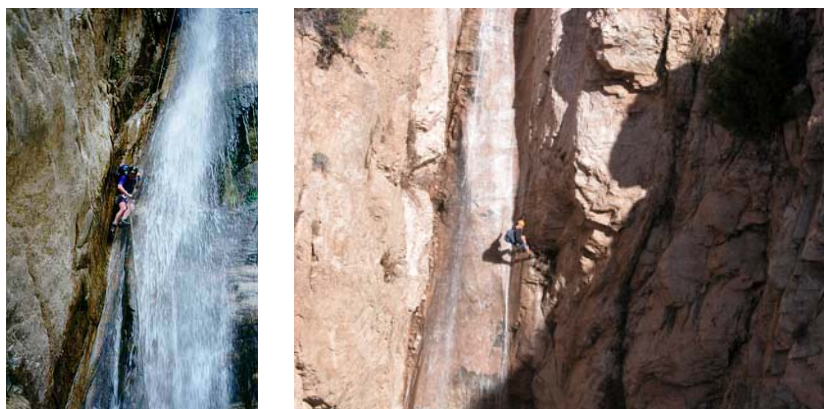
Diana's Bath from above and below.

out to climb the steep but well-maintained trail to Echo Mountain. Called the Sam Merrill Trail it begins at an elevation of about 1800ft and switchbacks about 1400ft up the western slope of the ridge that is Echo Mountain. While several of these switchbacks round the southern end of the mountain none penetrate any significant distance into Rubio Canyon for the eastern slope of Echo Mountain ridge is much more precarious. It took about 1hr 20min to climb the two miles to the remains of the old resort at the top of Echo Mountain. We walked past the ruins of buildings and relics of the railways to where an old set of concrete stairs marks the entrance to a once grand hotel, immediately adjacent to the location of the top station of the cable railway. I remembered the occasion years before when my son and I climbed the route of the Incline Railway and sat on these stairs together to enjoy the achievement and the warm summer air.

After pausing on Echo Mountain, we retraced our steps to the point where Castle Canyon Trail contours off to the right. Here we left the maintained trail and proceeded down the grassy, wooded slope on the northeast side of Echo Mountain. It was a fairly easy descent into Rubio Canyon and we reached the stream in about 10 minutes. Turning to travel downstream, we took pleasure in this open, wooded stretch of canyon that is home to much wildlife. A use-trail on a series of benches on the right side made downstream travel easy, at least initially. Two small waterfalls were readily negotiated. But then the canyon made an abrupt right turn and the canyon began to change dramatically. To negotiate the abrupt right turn we followed the water pipe a little distance up on the right wall of the canyon.

Just downstream of the abrupt right turn, a fair-sized tributary enters from the right. We made our way about 50yds up this tributary to the base of a large multistage waterfall whose lower, vertical drop is about 70ft high; the other, upper section which is visible from Echo Mountain, makes the total drop much greater.

Back at the junction with Rubio Canyon and proceeding downstream, the walls of the canyon became ruggedly vertical and we recognized that we were



Left: In Thalehaha Falls. Right: Dry route beside Thalehaha (photo by Robert Bowman).

entering the dramatic and exciting part of Rubio Canyon, the section over which it drops precipitously during its progress to the valley below. Just after the junction we had to wade for the first time and, about 10yds further downstream, we came to a double waterfall comprising 15ft and 12ft drops with an inviting, large circular pool in between. This is the pool that Professor Lowe called Diana's Bath. A water pipe was suspended above these falls on the right and there was a shelf (spanned by the water pipe) on the right above the circular pool. Climbing up to the pipe we used it to access the shelf and then rappelled from there to the bottom of the lower falls.

About 30 yds downstream we arrived at the awesome Thalehaha Falls, a vertical drop of 80ft down into a narrow, rockribbed cleft. There was little or no vegetation below and so it was hard to bring the bottom into perspective and thereby absorb the dimensions of the abyss; but it looked a very long way down. Even the intrepid Garrett Reisman paused before beginning his descent and actually wondered whether or not to seek an alternate route. It was, after all, early spring and the water flow was not as trivial as it would be later in the year. At low water this is a pleasant rappel descent. But in spring conditions, the flow over the 4ft wide brink spreads as it falls so that there is little escape from the shower anywhere below the lip. An old pipe embedded in the cliff about 10ft back from the brink provided a sturdy anchor for our descent. We tried to stay to the right where a sheltered groove in the cliff face provided some small shelter from the main water fall. But below a certain point, one simply had to take the soaking and get to the bottom fast.

When Thaddeus Lowe's Rubio Pavilion was thriving, the wooden walkways and staircases allowed tourists to come upstream all the way to this point at the base of Thalehaha Falls. In John Robinson's story of the San Gabriels there is a photograph of the Falls (that he calls Bridalveil Falls) with visitors perched on the wooden walkway. For us there was little opportunity to admire the falls during our descent. And once at the bottom that early spring day, it was hard



Left: Roaring Rift Falls (photo by Robert Bowman). Right: Lower Grand Chasm Falls (photo by Mark Duttweiler).

to warm up. Despite these conditions, one could not help but pause to admire these beautiful falls as they cascaded down into the dark grotto where we now stood.

Finally we gathered ourselves together and approached the two smaller waterfalls immediately downstream of Thalehaha. First came the 20ft high Roaring Rift Falls; two good bolts installed in the rock on the right of the lip allowed us to rappel down the right of this waterfall. Suspended Boulder Falls followed immediately in a corner where the narrow vertical-walled canyon made an abrupt right turn. Several ledges in the rock on the inside of this turn provided a convenient staging area for the descent of Suspended Boulder Falls. Over a century ago Thaddeus Lowe had his picture taken while standing on top of the suspended boulder lecturing to a small crowd below. We used an iron pipe imbedded in one of the higher ledges as the anchor for our 25ft rappel to the canyon below. Undoubtedly, this was also a support for Lowe's wooden walkway and so we were also making use of his device over a 100 years after it had been installed.

Another 40yds down the very narrow slot-like canyon we came to the remains of the small masonry dam that Lowe built to form the reservoir he called Mirror Lake. Of course, the reservoir had filled with sediment and so a flat sandy bottom had long ago replaced the "lake". The masonry dam formed the top lip of Grand Chasm Falls, a two-stage cascade with drops of 20ft and 40ft. An exposed use-trail climbed up to a tree above the lip on the right and it was thereby possible to access a ledge from which it was easy to climb down a scree slope to the bottom of Grand Chasm Falls. We chose the safer method of descent and rappelled down Grand Chasm using as an anchor a small tree about 10ft back from the lip.

About 30yds further downstream, we came to the last major hurdle, a beau-



Left: Ribbon Rock/Moss Grotto Falls. Right: Pool between Ribbon Rock & Moss Grotto.

tiful, two-stage waterfall with drops of 20ft and 30ft. Lowe gave separate names to the two parts of this waterfall and called them Ribbon Rock Falls and Moss Grotto Falls. Another account suggests he named them for his wife and called them Leontine Falls. We were tired and cold by this time and so, instead of rappeling, we chose to take the old, badly eroded trail that contoured around to a gully on the left and thus descended the gully to the bottom of the falls.

Now on familiar ground we proceeded downstream, climbed down Bay Arbor Falls and made our way out of the canyon to the trailhead. It had been another glorious adventure down one of the most precipitous and spectacular small canyons in the San Gabriel Mountains. A wild and violent place of tortured cliffs and sculpted chasms. A raw and marvelous beauty tinged with history and human challenge.

Several months later, in April of 1998, engineers in the employ of the Rubio Canyon Land and Water Association (RCLWA) began work on a project to repair the pipeline that carried water from high up in Rubio Canyon down to their reservoir at the canyon mouth. The RCLWA would later claim that the line had been damaged by the 1994 Northridge earthquake; if so that damage was not apparent to us during any of our adventures in the canyon. The RCLWA received one million dollars from the Federal Emergency Management Agency (FEMA) in order to carry out the repairs. Whether they also obtained the necessary environmental impact permits is still not clear. What is clear, as later events would reveal, was that instead of just repairing the pipeline the RCLWA enlarged the project and decided on a major re-routing of the pipeline. Thus, a few months later, they created a new trail through National Forest land from Echo Mountain down to a point high on the west wall of Rubio above Grand Chasm Falls. And here on this highly unstable slope of fractured rock they began, incredibly, to cut a roadway across the steep slope at the top of the wall. To do this they transported a backhoe by helicopter up to a cleared platform at the end of their trail. And so they began to hack away at the mountain with this backhoe perched three to four hundred feet above the



Left: Slide covers Ribbon Rock/Moss Grotto Falls. Right: Machines on the high shelf.

canyon bottom. When even that failed they resorted to dynamite. Eventually the inevitable happened. A huge section of the side of the canyon was shaken loose and the resulting rock slide crashed down into the canyon below, covering up Grand Chasm, Moss Grotto and Ribbon Rock Falls in the process. By some odd chance the platform where the backhoe was perched survived and sat there at the top of the slide path for several months thereafter, ironically revealing the cause of the catastrophe to any who might happen by.

It was Troy Sette who first described the rock slide to me and I must confess I listened to his account with considerable scepticism. But a few weeks later, driven by curiosity, I set out to investigate for myself and so started up the Rubio Canyon trail one Sunday afternoon in September 1998. Almost immediately I came upon a large, unsigned notice warning hikers of the danger of rockfalls in the canyon. Continuing on past the Rubio Pavilion site, I climbed the familiar Bay Arbor Falls and rounded the right hand turn in the canyon just before Ribbon Rock/Moss Grotto Falls. As I did so the most incredible site revealed itself. The entire 50ft of this glorious waterfall was now covered in rock. And more than this. The rockfall extended almost as far upstream as I could discern from this vantage point. Clearly Grand Chasm Falls were also covered and perhaps more upstream. It took several minutes for me to absorb the horror of the sight before my eyes. And so at first I focussed on the foreground where a wooden sign immediately before me read: "WARNING. HAZARD AREA. UNSTABLE SLOPE. NO OUTLET". Again the notice was unsigned. No indication of how or by whom this obscenity had been perpetrated.

I sat down to try and regain my composure and looking up I could now see that a large part of the west wall of the canyon above the Grand Chasm Falls had collapsed, producing an enormous rockslide that had created a huge rock dam in the canyon and covered up at least four beautiful waterfalls. From the bottom, I estimated the elevation of the top of the rock dam to be about 250ft above where I stood. And then, looking more closely at the scar on the west

wall, I could discern the top of a machine perched on the ledge directly above the scar. (I was later to find that machine was a backhoe.) I was overwhelmed by a combination of incredulity and shock. What on earth was a backhoe doing up on that unstable slope and how on earth did they think they could avoid causing some catastrophe by operating up there? Some of the answers to these questions would come later. For now all I could think of was to determine the full extent of the disaster. Some careful tests showed me that it would be foolhardy to try to climb the face of the still-settling rockslide. But I was able to safely make my way up along the side of the rockslide, by treading mostly on original ground. From the top of the slide, I could look south right into Altadena. Turning around I looked down into the partly filled narrow chasm upstream of the dam and downstream of Suspended Boulder Falls. The canyon bottom was about 60ft below me. Water was clearly still flowing through the rock slide itself, perhaps following its original course beneath all that rock. But if the interstices between the rocks ever filled up with debris and other sediment, the lake behind the new dam would be about 70ft deep and would extend up to the base of Thalehaha Falls. If the dam then failed, this huge mass of water would then go crashing down the canyon toward Altadena. I went home stunned.

The following weekend I set out to investigate further. This time I climbed Echo Mountain as I had done earlier with my young friends and thus made my way down into upper Rubio Canyon. Proceeding downstream as we had before, I negotiated Diana's Bath and arrived at the top of Thalehaha Falls. Looking down I could see a fair amount of debris (old pipes and some crates) scattered at the bottom of the falls. Moreover earth appeared to be falling down the west wall from above where I was standing, covering everything with a coating of brown and grey dust. I could not see the rock dam and so I decided to try to determine the source of the debris and dust. Backtracking about 20 yards, I was able to find a use-trail that climbed the west wall toward the source of the debris and dust. First I came upon a pile of old four-inch diameter water pipes, some of which were in the process of tumbling down to the canyon below. A little further on, the use-trail led, not surprisingly, to the ledge where the backhoe still stood. For the record it was a Schaeff inscribed with the name Tite Enterprises and the telephone number 818-367-4343. Immediately behind the backhoe stood a large, two-wheeled air compressor. Various ropes, gas cans, tool boxes and other equipment lay scattered around as though the site had only temporarily been evacuated. I could also make out, above me, the rope that the workers had used to help them descend to this point from the mountain above.

Now I could understand what had happened. South of the backhoe site and immediately above the scar vacated by the rockslide, I could see that the engineers had been hacking a sizeable horizontal slot into the steep and unstable slope above the west wall of Rubio Canyon. In the process they had to remove a very large volume of material from the slope above the cutting and they had blithely dumped all of this rock down into the canyon below. Additional material fell from below the horizontal cutting as the dynamite and the backhoe shook loose large quantities of the fractured rock. In the end they cut a roadway about 15ft wide and about 50yards long into the side of the mountain. It was

now obvious to me that the purpose of the work was to replace the section of the pipeline that ran across the mountain high above the glorious waterfalls of Rubio Canyon. And all that they had succeeded in doing was in destroying that priceless natural heritage. I went home very sad and quite angry and waited for the news to break in the local papers.

But I had a long wait. It was not until some six months later that concerned owners of homes near the Rubio Wash and angry hikers, forced the Rubio Canyon Land and Water Association to hold a public meeting to answer questions. Troy and I went along to find out more. All that I learned I had already figured out from my explorations of the site. Troy brought additional evidence in the form of used blasting cap casings. Much anger was vented by the hikers and much concern was expressed by the homeowners. The Association promised answers at some indeterminate time in the future. I heard some argue that the hillside was unstable and would have come down naturally. The evidence does not support that opinion. Indeed, it is clear that over the past hundred years and more, only gradual erosion has occurred, with the exception of a few large boulder falls.

Otherwise, we were told little and as I write this (March 1999) it remains to be seen whether any corrective action will be attempted. But it is almost impossible for me to imagine that they could ever remove the huge amount of rock that is covering up the waterfalls. Both the immense quantity and its inaccessibility make it seem an impossible task. And so I fear that the precious natural and historic heritage of Rubio Canyon has been lost forever. And I weep for that. And I mourn that I will never be able to climb up there with my grandchildren to enjoy those glorious waterfalls and to tell them tales of men like Thaddeus Lowe who loved Rubio Canyon and, by and large, respected that beauty. Instead I must tell them tales of more modern men whose ignorance and callousness destroyed that heritage forever.

Chapter 19

GRAND CANYON

“August 15, 1867. Early in the afternoon we discover a stream entering from the north - a clear, beautiful creek, coming down through a gorgeous red canyon. We land and camp on a sand beach above its mouth, under a great, overspreading tree with willow-shaped leaves.”

From “Canyons of the Colorado” by John Wesley Powell.

John Wesley Powell’s classic account of the first passage down the Colorado River through the Grand Canyon must rank as one of the most understated adventure journals of all time. Indeed his matter-of-fact diary is perhaps the only possible literary device to use in describing the Grand Canyon for it otherwise defies description. Powell’s account also initiated the legend of the Grand Canyon which spread inevitably to all corners of the globe. Today, 130 years later, people come from all those corners to see for themselves the reality of this natural wonder. Most edge their way a short distance along the rim, both amazed and overwhelmed by the immensity of the sight before them. Their brains register tilt for nothing has prepared them for this scale of deformity in the earth’s surface. And they stay to watch the changing colors and shadows as their eyes roam across this magnificent canvas. Some even venture a short way down the few trails that descend the great cliffs below. But to see the canyon from Powell’s perspective you must embark on an adventure yourself. Though paltry by Powell’s standard, it is still to this day a significant achievement to be able to stand in the Colorado River and look up at the magnificent cliffs reaching into the sky all around you. To get there you must either (1) travel by boat down miles of fierce rapids (2) entrust your life to a mule and travel bumpily down trails with thousand foot drops just inches away or (3) hike the vertical mile down those same trails. I chose the third alternative.

In March of 1999, Clancy Rowley, Mark Duttweiler, Christine Pajak and I drove to the Grand Canyon to get to the bottom of it. It was a trip arranged at



Left: Colorado River from the South Rim. Right: Start of South Kaibab Trail.

the last minute and so we had none of the required permits. After a brief but futile effort to obtain a backcountry permit that would allow us to camp at the Bright Angel Campground by the Colorado River, we decided to spend the first day hiking part of the way down the Hermit Trail. Thus we spend a pleasant day hiking down to Santa Maria Springs (elevation 4880ft) from Hermit's Rest (6640ft) and back up. We followed that with a very scenic hike along the Rim Trail from Mohave Point to Hopi Point. This prepared us physically and mentally for the next day, March 24, when we planned to hike to the Colorado River and back to the rim.

The South Kaibab Trail was constructed by the National Park Service in 1924 to compete with the privately owned Bright Angel Trail because Ralph Cameron charged a \$1 toll for the latter. All the other trails down into the Canyon were located along the easiest routes and these were virtually all beside major creeks feeding the Colorado whose watercourses had eroded substantial recesses in the canyon walls. As a consequences the views from these other trails, while still spectacular, tended to be restricted by the surrounding canyon walls. On the other hand the South Kaibab Trail was specifically constructed with tourists in mind and follows an open, lateral ridgeline rather than a lateral valley. This, in itself, makes for a spectacular trail and its views are gloriously panoramic. The builders did have to build another bridge over the Colorado at the bottom of the trail and this was a major undertaking. For this bridge, eight 550 feet long, 2320 pound steel cables, 1.5 inches in diameter, had to be carried down the almost-completed trail. This considerable feat was accomplished by 42 Havasupai Indians each of whom therefore hefted 50 pounds of cable down 6.3 miles of tortuous and precipitous trail. The cables thus crept down into the canyon like great, squirming centipedes.



Left: O'Neill Butte from Cedar Ridge. Right: South Kaibab Suspension Bridge.

Clancy and I caught the 7.15am bus to the South Kaibab Trailhead (elevation 7260ft) and went over the rim about 7.30am. The first phase descends the very steep upper wall of the canyon by means of a spectacular series of switchbacks cut into a recess in the otherwise unnegotiable cliff. At the bottom of the rim cliff you then emerge onto a talus slope and the trail contours along this slope to the apex of the South Kaibab ridge below Yaki Point. For most of the descent from this point to the Tonto Plateau, the trail follows Cedar Ridge and allows access to frequent sensational panoramas sometimes to the west, sometimes to the east. Shortly after gaining the apex of the ridge, we arrived at 8.10am at the Cedar Ridge Resthouse with its magnificent views, 1.5mi down the trail at an elevation of 6320ft. We were most fortunate; the day was crystal clear and cloudless.

Continuing on, the trail proceeds around the east side of O'Neill Butte, descends to a flat-top mesa and then drops off the end of the mesa down through a quite dramatic chute. Below this it reaches down to the Tonto Plateau where there is another resthouse at the intersection of the South Kaibab Trail and the Tonto Trail (elevation 4000ft). A few yards beyond that junction, the trail plunges off the edge of the Tonto Plateau at a place appropriately named the Tipoff, 4.4mi from the trailhead. Suddenly, dramatic and precipitous views of the Colorado open up as the trail snakes down the steep walls of the Inner Gorge toward the river. The rock changes from the red and white sandstone of the upper cliffs to the black and green colors of the Vishnu Schist. This change is called the Great Unconformity, a name that would be pretentious anywhere else but in the Grand Canyon. Finally, 6.3mi and 3hr from the rim, we arrived at 10.30am at the bottom of the Grand Canyon where the river elevation is 2480ft. Just short of the river, you encounter a trail fork; the left trail proceeds west along the precipitous south bank (cliff) of the river. We took the right fork that leads, via a tunnel, to the Kaibab or "Black" Suspension Bridge. Crossing the bridge we stopped at Boat Beach just downstream on the north shore. Here we lingered in the warm sun, even shed our boots and waded in the Colorado River. I would have liked to swim but the water was a very cold 47 degrees (Fahrenheit) despite the air temperature in the 90s. But the river is magnificent, fast and powerful. It was hard to see how one could possibly cross it safely without some

sort of boat. At last, I could stand in the Colorado and look up at what John Wesley Powell would have seen on

“August 16, 1867. We must dry our rations again today and make oars. We have named one stream away above, in honor of the great chief of the “Bad Angels,” and as this is in beautiful contrast to that, we conclude to name it “Bright Angel”. Early in the morning the whole party starts up to explore the Bright Angel River, with the special purpose of seeking timber from which to make oars.... The stream heads away back under a line of abrupt cliffs that terminates the plateau, and tumbles down more than 4,000 feet in the first mile or two of its course; then runs through a deep, narrow canyon until it reaches the river.”

But amazingly Powell also found the remains of human habitation. To continue the previous quotation from his diary:

“Late in the afternoon I return and go up a little gulch just above this creek, about 200 yards from camp, and discover the ruins of two or three old houses, that were originally of stone laid in mortar. Only the foundations are left, but irregular blocks, of which the houses were constructed, lie scattered about. In one room I find an old mealing-stone, deeply worn, as if it had been much used. A great deal of pottery is strewn around, and old trails, which in some places are deeply worn into the rocks, are seen. It is ever a source of wonder to us why these ancient people sought such inaccessible places for their homes.”

But back to the present. After our sojourn on the historic Boat Beach where Powell once camped, we resumed our hike along the north side of the river. It was but 0.4mi to Bright Angel Campground perched on a narrow strip of land along the west bank of Bright Angel Creek just above the point where it empties into the Colorado. Another 0.5mi up Bright Angel Creek brings you to Phantom Ranch, 6.9mi from the South Kaibab Trailhead. The Ranch has a number of cabins available for rent (about \$63 per night in 1999) though these are booked many months in advance. It also has dormitory bunk beds at \$23 per night. It is a pretty and serene little place amid the relatively luxurious foliage of Bright Angel Creek. Clancy and I stopped there in the shade while I consumed a Phantom Ranch lemonade. But, all too soon, it was time to move on. We made our way down Bright Angel Creek to the Silver Suspension Bridge over the Colorado River. Interestingly this second bridge serves another purpose besides allowing hikers to cross the river. It also carries the high pressure water pipeline that supplies the South Rim with water from a spring source to the north. This pipeline is routed through Indian Gardens where the pumping station is close to the Bright Angel Trail.

We crossed the Silver Suspension Bridge at 11.55am and followed the River Trail westwards along the south side of the Colorado River. This section is unpleasantly sandy until it begins climbing a steep bluff where the river makes a left turn. Turning the corner the trail descends again to the small, rocky beach



Left: Colorado by Bright Angel Creek. Right: Top of Bright Angel Trail.

where the Bright Angel Trail meets the Colorado, 2.1mi from Phantom Ranch. Here at 12.25pm we paused only briefly before entering the small narrow canyon through which the Bright Angel Trail begins its ascent.

And so we began the long climb back up to the rim along the Bright Angel Trail. The upper part of this trail was originally used by the Havasupai Indians to commute between the rim and Indian Gardens. Prospectors, looking for gold, improved the trail at the end of the last century. Then one enterprising prospector, Ralph Cameron, realizing that there was more money to be made from the tourist trade than from mining, bought out his companion's interests in the trail and set up a toll booth, charging sightseers \$1 to venture down below the rim. He also extended the trail to the Colorado. It was only after a long battle with Cameron that the National Park Service took over the trail in 1928.

Leaving the River Resthouse, elevation 2400ft, the Bright Angel Trail first winds its way gently up the the pleasant canyon of Pipe Creek. After about half a mile you pass a pretty, mossy waterfall on the right wall and shortly thereafter, the trail leaves the creek bed and climbs up the steep right wall of the canyon using a series of switchbacks known as the Devil's Corkscrew. The name refers to the fact that this is usually the hottest segment of the trail with temperatures in the summer that often reach 130 degrees Fahrenheit. The black rock of the Vishnu Schist mercilessly absorbs the sun and bakes the air. Even on this March day it was close to 90 degrees. However the trail soon emerges from the Devil's Corkscrew and transitions into the next canyon through which Garden Creek runs. As we made this transition, the lovely sounds of flowing water floated down to us and soon we were soaking our heads in the water of Garden Creek under the shade of willow trees. The next section is much more pleasant as the trail winds its way up through the Tapeats Narrows, the canyon of Garden Creek, finally (at an elevation of about 3800ft) emerging from the Inner Gorge onto the Tonto Plateau. As we did so we could also see hikers on the Plateau Point trail over to our right. Soon we could also see the trees and bushes of Indian Garden and, 1hr 35min after leaving the Colorado, we arrived at that busy and attractive oasis. In the spring this is a particularly attractive rest-stop, with the vibrant purple tree flowers providing a special delight.

The focus of life at Indian Garden is, of course, the water fountain with its

multiple spigots. We splayed ourselves on one of the surrounding benches and drank our fill before seeking out a picnic table to enjoy a leisurely lunch. I even took a 10min snooze atop a neighboring table in order to settle my food and prepare for the next long haul.

Above Indian Garden, the trail initially proceeds into the head of the canyon until it seems almost directly below the rim. It then begins a long series of switchbacks as it climbs the increasingly steep wall below the rim. This section is known as Jacob's Ladder and involves a long and arduous climb. There are two self-explanatory rest houses. An hour out of Indian Garden we arrived at Three-mile Resthouse (elevation 4720ft), perched on an outcropping with one of the better views from the Bright Angel Trail. Beyond Three-mile Resthouse, the trail has been cut into the cliff, the natural slope being close to vertical. One-and-a-half-mile Resthouse (elevation 5720ft) sits on a rock slope and presages the last 1000ft up a natural break in the cliff wall. The Bright Angel Trailhead comes into view at the end of a long switchback just below the rim (elevation 6860ft). The total distance from the river is 7.7 miles and we reached the rim and the Bright Angel Trailhead (6860ft) at 5.20pm, just under 5 hours after leaving the Colorado (inclusive of a 40 minute break at Indian Garden).

And so we traveled a microscopic distance in the shoes of John Wesley Powell. It did not help me understand what drove that almost fanatical, one-armed adventurer for this 1999 visit was hemmed in by those constraints necessary for managing visitors to such a popular destination. I had to cast my mind back to other adventures in much wilder places in order to understand the lure, the narcotic of the unknown and the untamed. Of solitary confrontation with physical challenge and the delicious hint of danger. But I ask myself whether I would have dared to challenge this gigantic place had I stood in Powell's shoes. I doubt it very much.

Chapter 20

THE SUBWAY

*“I am bound, I am bound,
for a distant shore,
By a lonely isle, by a far Azore,
There it is, there it is,
the treasure I seek,
On the barren sands
of a desolate creek.”*

*From “A Week on the Concord and Merrimack Rivers” by Henry
David Thoreau.*

Zion National Park in southwestern Utah is one of loveliest places on earth. But if you visit it in the usual way, by driving up into the main canyon where it opens up into the desert and if you do not venture far from the road you will only have seen a fraction of this beauty. Beyond the asphalt, lie magnificent sculptured canyons, luxurious grottoes and awesome carved sandstone ravines that can only be reached on foot and, sometimes, only by swimming and rappeling. This is a mecca for canyoneers and the adventure hikes in Zion must rank as among the best in the world. Many would rank “The Subway” as their ultimate favorite.

The Subway is the name given to a section of canyon in the Left Fork of North Creek near the western boundary of Zion National Park. The name derives from the fact that along one stretch of the Left Fork where it has carved a deep slot canyon into the red sandstone, the bottom of the slot opens up into a circular, tube-like cross-section. But there is much more to the Subway than just this odd feature. The hike begins at an elevation of 7000ft, high on the Markagunt Plateau that surrounds Zion (except on the south). It descends through spectacular carved sandstone scenery before dramatically climbing down into the slot canyon. There the adventurer is treated to a marvelously varied sequence of natural sculptures and physical challenges.

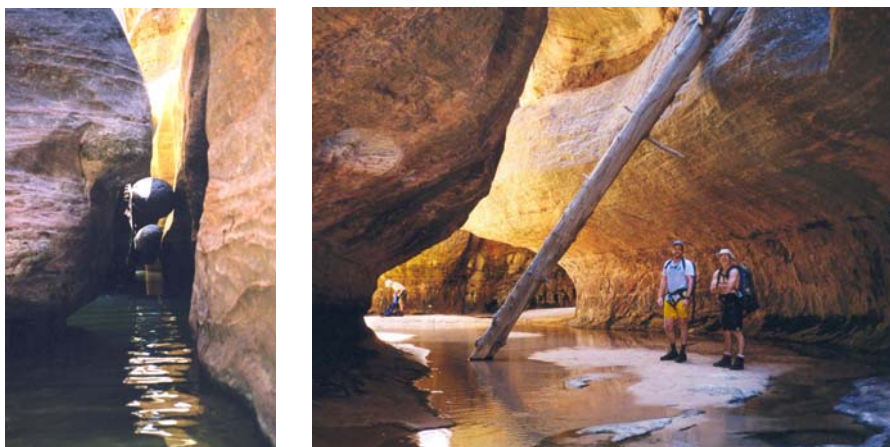


Left: On the slickrock. Right: Slickrock Bowl.

On June 18, 1999, Troy Sette, Joel Paslaski, Martin Vanderveen and I set off to hike the Subway on a glorious, crystal clear day. We had obtained our backcountry permit the preceding day and camped overnight in the National Park campground. Early in the morning, we drove two vehicles back out of the Park and west to the town of Virgin about 14m away. There we turned north on the Kolob Reservoir Road and traveled 8.5m to the Left Fork Parking Area on the right side of the road. Leaving one vehicle in that sandy parking area, we continued another 7m up to the Wildcat Canyon Trailhead (7000ft), located a hundred yards or so down a dirt road on the right. Parking the second vehicle there we set off at 9.10am on a trail across the flat, partly wooded mesa.

It was a pleasant, sunny but cool morning as we followed the trail eastwards over the gentle mesa. After about 1 mile, the Hop Valley connector trail comes in on the right but we continued on for another 200yds or so to the junction with the trail to Northgate Peaks. Forking left we followed the Northgate Peaks trail for about 50yds to the top of a small rise. This reveals a large slickrock slope on the left of the trail. Leaving the trail, we followed a series of ducks that led us down the slickrock while angling to the right. At the bottom of the slope, the ducks lead to a well-traveled trail that enters the brush and trees alongside a small creek. This is a pretty section with luxurious ferns contrasting with the raw slickrock higher up. After several hundred yards, the trail emerges again onto the slickrock and the route down to a creek crossing is again marked by ducks including one huge one just beside the creek. We reached this point at an elevation of about 6300ft about 35min after leaving the trailhead at an elevation of 6300ft. The trail on the other side of the creek continues to be well-ducked as it crosses some rough rocky ground and traverses over toward Russell Gulch. Just before the Gulch you arrive at a section of steep descent that leads to the Russell Creek crossing at an elevation of 5800ft (2.6 miles and 1hr from the trailhead).

On the other side of Russell Creek, the route climbs the slickrock toward



Left: Chockstone boulders. Right: The Subway.

a bare rock saddle where there are two prominent hoodoos. Only a few ducks mark this section but it is hard to miss the saddle. Once the saddle is broached, there is a spectacular view south into a broad slickrock bowl. Before descending, it is wise to pick out the trail in the distance as it snakes through the trees on the far side of the bottom of the bowl. The route descends straight down into the bowl following the ducks and continues contouring through the woods toward the manzanita slopes high above the left side of Russell Gulch. At this point the Gulch is out of sight in a gorge off to the right. As is the case throughout this hike, the trail is well worn and easily followed; it is particularly important not to lose the main trail during the next section.

About 3.7 miles into the hike at an elevation of about 5600ft, the trail quite suddenly arrives at a spectacular viewpoint high above the junction of Russell Gulch and the Left Fork of North Creek. The view here is quite awesome; you can look both upstream and downstream into the vertically walled Left Fork ravine and, simultaneously upstream into the canyon of Russell Creek. It is hard to visualize how you will be able to make the descent into the canyon below you. However, just around to the right, you will arrive at the top of a steep and narrow gully by which to make the descent with some Class 3 downclimbing. In this gully you drop over 200ft, arriving at the bottom beside a large pool in Russell Gulch. The confluence with the Left Fork is only 20yds downstream at an elevation of about 5300ft.

This marks the start of a beautiful transit through the scenic and wondrously sculpted gorge of the Left Fork of North Creek - known throughout the hiking world as "The Subway". In contrast to the reflected heat of the slickrock higher up, it is cool here in the canyon depths and you should take your time over the next few miles to truly enjoy this marvellous canyon. About 200yds from the Russell Creek junction, a small boulder field leads to the first serious obstacle, consisting of a large canyon-blocking boulder forming a 12ft drop. The easiest descent is to chimney down the gap on the right between the boulder and the



Left: The Subway. Right: Red stone cascade.

canyon wall. A large log in the chimney currently allows relatively easy descent by straddling and sliding down it. A short distance further on the canyon closes in and you arrive (4.3 miles from the start at an elevation of 5240ft) at two deep pools in a section of canyon only about 6ft wide. At the ends of the pools (30ft and 15ft long) are small cascades that are easily negotiated. However, both pools can be deep enough to require swimming. We lunched on a sunny little beach just downstream of these pools and about 2hrs into the hike.

About 100yds beyond the pools, you will encounter a more challenging and interesting obstacle where the stream flows through a very narrow slot only about 2-3ft wide. The less challenging route is to bypass this slot by climbing to a ledge on the left about 12ft above the stream at the entrance to the slot. Though somewhat wet and slippery due to water seepage, this ledge can be used to travel (crawl) downstream to the end of the slot; there you can descend to the canyon floor by rappelling or downclimbing a tricky and steep rockslope (a conveniently placed tree provides a good anchor for the recommended 30ft rappel). However, it is more fun to take the direct route and proceed down the narrow slot in which the water is initially only a few feet deep. However, you quickly arrive at a small two-stage waterfall by which the water falls into a small cavern with chest deep water. The waterfall can be downclimbed using several convenient footholds. The exit slot downstream of the cavern is even narrower - about 18in wide and at one point two round chockstone boulders are jammed between the slot walls, one above the other. The best way through is to place your pack on top of the lower boulder and then slide under it almost completely underwater, retrieving the pack after you have emerged on the other side. The end of this intriguing obstacle is just beyond the chockstone boulders.

Downstream the canyon widens again but the walls seem to grow in height. About 0.3 miles from the chockstone boulders (and 4.9 miles from start), the canyon again narrows to a slot and you arrive at Keyhole Falls, a 10ft drop easily recognized by the hole in the rock just above the lip on the left. Bolts in the rock on the right provide a convenient anchor for the rope or webbing used for the small downclimb or rappel. We reached this 5250ft elevation about 3hrs 15min into the hike.

The Keyhole Falls lead to a narrow slot that continues for about 50yds with some curious geometric shapes in the rock. It then widens, the walls steepen and the overhangs characteristic of a subway appear. This spectacular subway shape proceeds for several hundred yards until you arrive at another place where the stream drops into a narrow slot in the canyon bottom as the canyon makes a right turn. A series of contorted pools in the bottom of this slot make it easier to descend a short distance downstream of the falls by following the prominent ledge on the left to a place where bolts have been installed on the sloping rockface. This is the longest rappel on the hike, a descent of about 35ft that requires a 70ft length of rope for a safe double-rappel. Here, at about 5200ft, we were 4hrs from the trailhead.

There is a short but magnificent section of subway downstream of the rappel before the canyon opens up into a more conventional shape. This marks the end of the technical descents and the rest of the hike only requires negotiation of boulder fields. In the next half mile there are a series of beautiful and gentle cascades over red sandstone. This rock surface is less slippery than one might guess at first sight and it is relatively easy just to hike down the water-covered rock. In several places it is necessary to follow the use-trails through the vegetation on the left in order to circumvent larger falls formed by boulders. The canyon bottom gradually becomes more benign and soon the use-trail is almost continuous, mostly following the right side.

The next challenge is to recognize where to begin the climb out of the canyon up the steep right wall. There are some faint trails where others have begun the ascent too soon and you need to avoid following these incorrect routes. It is useful to look for two tributary streams that enter on the right. Just beyond the second stream, you should notice a prominent black lava outcropping high above you on the right rim of the canyon. From the bottom you should be able to spot in the recess just before the prominent outcropping one of the few breaks in the upper cliff that could allow escape from the canyon. The beginning of the ascending trail is about 8.3 miles from the start of the hike at an elevation of 4700ft. It proceeds almost straight up a shallow gully before steepening, traversing to the left and proceeding through the aforementioned gap in the cliff. The climb to the plateau is about 400ft. Once at the rim, it is an easy and relatively flat hike of about 0.8 miles along a well-worn trail back to the lower trailhead (4900ft). The total length of the hike is about 9.5 miles over 7hrs.

Chapter 21

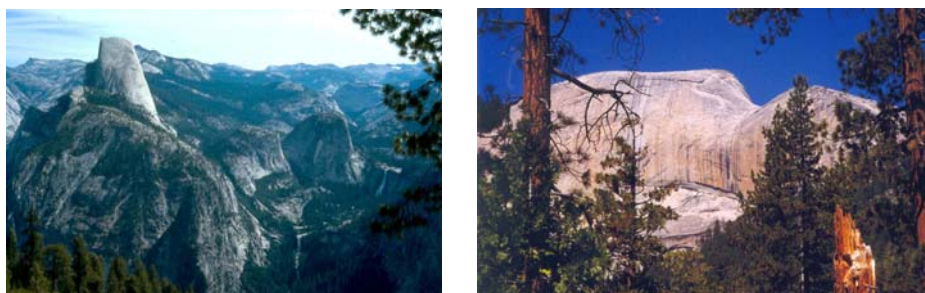
HALF DOME

*“Tis-sa-ack and Nangas have broken the spell of peace.
Let us transform them into cliffs of granite that face
each other so that they will be forever parted.”*

From the Yosemite Indian legend of Half Dome.

Half Dome adorns the great valley of Yosemite like a crown jewel. Its symmetric shape and sheer polished walls are known throughout the world and people flock to this corner of California to see this and the other colossal monuments of the world's first great park. It was Abraham Lincoln who first set a marvelous precedent for the world when he signed the bill in 1864 establishing Yosemite as the nation's first state park; twenty six years later it became the first National Park. And yet this magnificence was revered even before the white man ever set foot in this land of spectacular natural beauty. The Yosemite Indians who lived on the floor of the valley must have wondered about the awesome monuments around them for they created legends to explain their existence. The legend of Half Dome tells the tale of a young married couple, Tis-as-ack and her husband Nangas, who disturbed the peace of the valley when he abused her and she retaliated. In retribution, the gods turned them into cliffs of granite that face each other silently and forever. The husband Nangas became the Royal Arches and his wife, Tis-as-ack was transformed into Half Dome. The Yosemite pointed to the dark streaks rolling down the great face of Half Dome and said that those were the tears of Tis-as-ack as she ran from her husband.

The geological story is less appealing but tells of a great rounded block of granite that was sheared in half by the glacier that formed Yosemite Valley. Today the 8836ft monolith continues to be weathered by ice that peels great slabs off the surface in a process likened to the peeling of an onion. But this occurs over geological time. Over climbers time the rock is quite stable (despite the occasional rock falls). Yosemite is perhaps the world center of big wall climbing and many of the techniques that revolutionized the sport were developed there



Left: Half Dome from Glacier Point with Nevada and Vernal Falls on lower right. Right: Half Dome from the back.

on the awesome walls of El Capitan and Half Dome. In part this was due to the high quality of the granite; and embedded in the granite are nodules of harder rock that provided excellent natural handholds. And so today Half Dome is a favorite with big wall climbers who regularly find their way up the sheer northern face of the monument, past the tears of Tis-as-ack. The other sides of Half Dome are less steep but even they present a serious rock-climbing challenge. The easiest of these difficult routes is up the eastern shoulder where the slope is still a very steep 46° . This route was first climbed by one George Anderson in 1875; then in 1919 a system of cables anchored to the rock was installed and, for the first time, allowed the summit to be attained without technical equipment. The route is still challenging and dangerous with breath-taking exposure but within the capability of the experienced hiker. I had heard of this adventure from others and set out in the summer of 1999 to experience it for myself. In order, at the same time, to sample again the marvelous high country of Yosemite, I resolved to hike from Tuolumne Meadows to the Valley, passing behind Half Dome and climbing it as a sidetrip along the way.

At 7.30am on Friday, Aug. 13, 1999, I parked my Montero in the designated hikers parking lot set back from the road a short distance east of the Curry Village in Yosemite Valley. The previous day I had obtained my backcountry permit from the Backcountry Office in Yosemite Village, and that came with a parking permit and map. The Backcountry Office also rents bearproof food cannisters at a very reasonable price and I strongly recommend renting one for reasons that will emerge.

It promised to be another glorious, cloud-free day and a sense of excitement and adventure suffused me as I caught the shuttle bus to Yosemite Lodge. There I would connect with what is known as the hikers bus, bound for Tuolumne Meadows. I half-expected some sand-blasted old crate with open sides and backpacks piled high on the roof. Instead it was a comfortable big tour bus filled with hikers. Leaving from Yosemite Lodge every morning at 8.20am, the bus stops by request at any trailhead on the way along the Tioga Road to its terminus at Tuolumne Meadows. However, we had only traveled a few hundred yards down the valley exit road before I had reason to wonder whether Friday the



Left: Cathedral Lake and Peak. Right: Near Cathedral Pass.

13th might be a poor day to embark on an adventure. The bus driver announced that he was feeling sick and stopped to throw up at one of the roadside toilets. Several minutes later he emerged looking only marginally better and blamed the mishap on having had breakfast at the Yosemite Lodge cafeteria. Another stop was made at the Crane Flats gas station before we set out up the Tioga Road. On this particular trip we made stops at White Wolf, Yosemite Creek, Olmsted Point and both ends of Tenaya Lake before reaching my Cathedral Lakes trailhead (just a mile or so before the terminus).

Tuolumne Meadows (elevation 8600ft) and the surrounding high country is, in my opinion, some the most beautiful country in the world. The combination of buff granite monuments, conifer forest, lush natural meadows and crystal streams, cascades and lakes creates an environment that glitters in the summer sunshine and in the winter snows. My spirit is always lifted by the sight and smell of this land and I wonder why I do not come this way more often instead of traveling to distant lands with only a pale comparison to this beauty. And so it was a sense of exhilaration that I hoisted my backpack at the Cathedral Lakes trailhead (8560ft) at about 10.20am on this August morning and set off on my cross-country route to Half Dome and the Valley. From the meadows, the trail climbs gently through open conifer forest and across small alpine meadows as it rounds the western side of Cathedral Peak. Initially the view backwards includes Tuolumne Meadows but as the trail turns and rises there are some scenic views of Fairview Dome to the north. About 1hr 40min and 3.1 miles you come to the junction (elevation 9360ft) with the spur trail down to lower Cathedral Lake; I kept to the left along the main trail and arrived at the beautiful upper Cathedral Lake (elevation 9585ft) about 15min later. This is a truly magnificent place and a delightful lunch spot. If you have time, a circuit of the lake will provide some

great mirrored views of the twin spires of Cathedral Peak (10940ft) and Eichorn Pinnacle that tower over the east shore of the lake.

Leaving Cathedral Lake, it is a short climb to the shallow Cathedral Pass (9680ft and 2hr 10min from trailhead) where you enter a very pretty flat meadow, the starting point of Echo Creek that flows south into Little Yosemite Valley. This is gentle high country and the trail contours gradually along the right side of the meadow and the lower eastern slopes of Tresidder Peak as it rises slowly above the valley. Eventually it reaches the ridge and rounds the base of Columbia Finger before rapidly descending the other side into another beautiful meadow, Long Meadow. Once in the meadow, it then meanders downstream beside the stream until, 7.1 miles from the start, it arrives at the marked junction with the Echo Creek trail (at 9320ft). This fork is at the head of a lower section of the aptly named Long Meadow and we take the main trail that continues along the right side of this large meadow. After traveling south for a spell, the route leaves the main stream and follows the right edge of the meadow as it turns right up into a short side branch. Just after this right turn you pass Sunrise High Camp (elevation 9280ft and 8 miles from start) built on the rocks a little above the meadows on the right. I reached Sunrise about 4hr 40min after setting out.

Beyond Sunrise, the trail rounds the head of this side branch of the meadow and arrives at a trail junction, the left fork being the way to Half Dome and the Valley. Beyond the fork, it climbs a short way to a saddle and crosses a stream with the last water for a few miles. There follows a long gradual climb along the side of Sunrise Mountain; eventually this culminates in a broad ridge saddle with the first spectacular views down toward the monuments of Yosemite Valley. The trail then begins a steep switchbacking descent of about 1200ft beside a small creek. At the bottom of this tough descent, it flattens out into a welcome easy stretch through dense forest. This transitions into another long flat section in a natural trough along the top of an ancient moraine and finally concludes (13.7 miles from start) at two trail junctions in rapid succession: the first at 8200ft is the Forsyth Trail joining from the right and the second at 7880ft is the high trail left to Merced Lake. The main route then contours into the small valley of Sunrise Creek (a fine clear stream with great drinking water) and descends first along the left bank, later crossing to the right. The proximity of the upcoming junction with the Clouds Rest trail can be judged by the increasing frequency of obvious but unofficial backpacking campsites.

I arrived at the junction with the Clouds Rest trail (7200ft and 16.4 miles from start) at 6.00pm, about 7hr 40min after setting out. There are many attractive campsites scattered about in the forest around this junction including a number along the banks of Sunrise Creek. I choose a very nice site atop the rocks just a few yards up and to the left of Clouds Rest trail. It had been a long day, I was weary and my feet were sore but there was adequate daylight left for the necessary tasks. I ate dinner, pumped water and then hung my food bags high above the ground from a branch of a tree about 10yds behind the campsite. I had done this effectively before and thought that the height and distance from the tree trunk were sufficient to keep my food safe from any passing bear.

However, about 10.30pm, the fun began as I could overhear people below me yelling at a bear to chase the animal away from their campsites. I dozed back to sleep only to be starkly awakened at 11.15pm by the bark-tearing sounds of a bear climbing my food tree, followed by a loud crack as he (or she) broke the branch from which my bags were suspended. It took all of about 30sec for him to overcome the hurdles I had placed in his way and almost before I had awakened, he had dragged the bags a short distance into the cover of some bushes. By the time I had located my spectacles and flashlight he was already munching on his meal and I knew there was little point in trying to drive him away until he finished. There followed a long period with many sounds of tearing, licking and eating. He consumed all of my food, from Doreen's shortbread to my oatmeal, poparts, ramen, can of baked beans (punctured by tooth or claw), plastic bottle of powdered Gatorade and container of coffee. Only then did he lumber over toward my campsite looking, I guess, for another handout. When he mounted a log about 20ft from where I was lying, he finally came into full view. I flashed my light at him and yelled. He turned and left. It took me until 3.00am to get back to sleep again.

It was 7.00am before the sun reached me and motivated me to rise and dress. The first order of business was to inspect the remains of the bear's feast. At first I was mighty puzzled because I could not find anything. Then I realized that the bear had dragged my bags a short distance into some bushes. I salvaged a few items, a can opener, a carabiner and one torn bag and then cleaned up his mess as best I could. There was little left to do but pack up and be on my way - but I then discovered a packet of hot chocolate that I had failed to hang up and inadvertently left lying on the log. The hot chocolate tasted very good in the morning chill. Other than water I had but half a bottle of Gatorade to last me the day. It did not seem like a major problem as my spirits rose with the warmth of the sun.

Thus it was that I set off about 7.40am, traveling toward Half Dome of which there were increasingly spectacular views. The morning was bright and cloudless and I relished the thought of the coming adventure. After contouring along the east end of the base of Half Dome for about 0.7m, I arrived 20min later at the junction with the spur trail that led up toward the monolith. The junction at 7000ft was 17.1 miles from my starting point the previous day. I stowed my pack behind a log out of sight of the trail (no food left to worry about!) and carried only my waterbottle, wallet, camera and polartec jacket as I hiked up the steep trail toward Half Dome, 2.6 miles away. The initial climb follows a series of switchbacks up a steep wooded slope that eventually reaches an overview of Yosemite Valley and Tenaya Canyon. Then it climbs a wooded ridge, approaching Half Dome from the east. This culminates in a broad level clearing (gathering site) at the top of the wooded ridge. Here the trail makes an abrupt transition onto steep, bare rock and increased care must be taken on a number of accounts. There is not only the danger of a substantial fall but also, as the signs warn, a very real danger from lightening when storms are threatening. Large signs warn you not to proceed any further if there is any sign of an impending storm. But this was hardly a problem this morning for



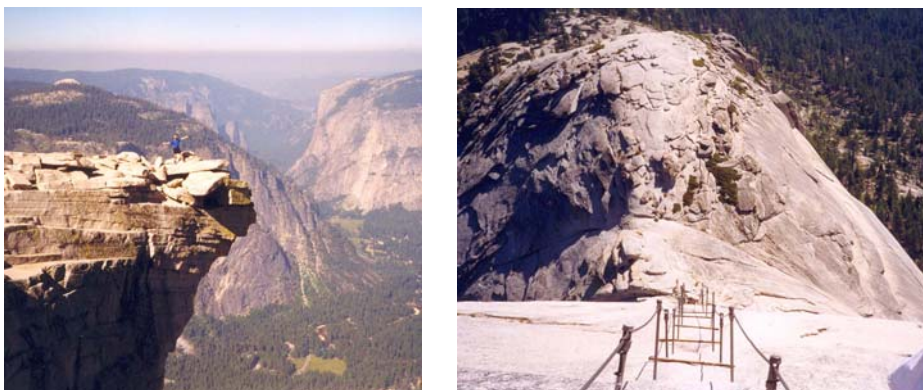
Left: From the Half Dome trail. Right: Half Dome cableway.

not a cloud could be seen in the sky.

Rock steps have been constructed on this steep rock slope and allow fairly easy though slow upward progress. Now you begin to recognize the increasing exposure and the increasing height of this switchbacking stairway. Gradually the slope lessens and you climb onto a bare rock shoulder on the east side of Half Dome. This is the shoulder that is readily visible from far below and, looking down, you recognize just how far you have climbed up the monolith.

But this nothing compared with the sight directly ahead of you as you broach the shoulder. Suddenly, the most amazing sight presents itself. On the other side of a shallow saddle separating the shoulder from the summit block of Half Dome is a very steep “trail” straight up a seemingly smooth, vertical rock face. The summit is about 400ft up this “trail”. It is an awe-inspiring sight both for its apparent verticality but also for its exposure and height. The “trail” consists of two thick steel cables about 3ft apart. At intervals, these are anchored to bolts fixed in the rock face; they are also elevated by passing through loops on the tops of steel rod posts loosely set in holes drilled into the rock. Two-by-fours are laid across between the pairs of posts to act as steps for resting on. At the bottom lay a large pile of gloves in various states of disrepair. I was glad I had the foresight to bring my own leather gloves for few of those in the pile were intact and most were cloth rather than leather.

From the shoulder the vertical trail up the cable way looks exceedingly frightening and quite vertical. Many decide not to proceed and to watch their fellow hikers tremble their way to the top. In fact, the ascent is not as scary as it looks. Despite the exposure it is a fairly easy, though tiring climb. In fact the slope is only about 46° . There is a short, steeper section in the middle of the ascent and there I was glad to have good soles on my hiking boots (sneakers would be



Left: On the "Diving Board". Right: Looking down.

much less secure). Near the top the slope eases and, all of a sudden, you are but a few yards from the 8842ft summit of Half Dome. This summit is right on the edge of the famous, vertical face you can see from the valley below and in just a few yards you can look straight down 4800ft to the floor of Yosemite Valley. It is a truly awesome view. To the west you can see the busy Yosemite Valley and the prominent profile of El Capitan. To the northeast you look up Tenaya Canyon. Even Tenaya Lake is visible in the distance. To both the north and south are breathtaking views of the rugged high country of Yosemite National Park. It all glittered in the morning sun.

I took photographs though even as I was taking them I knew none would do justice to the spectacular panoramic view before me. There is one prominent rock projection that juts out from the summit over the top of the 4800ft vertical face. Known as the "diving board", it makes for an awesome photograph. I was able to do a deal with another climber; we took each others photograph standing as far out on the diving board as we dared.

All too soon it was time to descend, a phase I was somewhat apprehensive about since descent is more frightening than ascent. You must look down rather than up to see where you are going. But I found it straightforward and made a rapid, face-forward descent to the shoulder in a matter of minutes. The security provided by my leather gloves and my lug-soled boots was particularly reassuring. I even paused along the way to take some pictures looking down. Behind me, the man who took my picture on the diving board was not doing so well. From the shoulder I watched him descend backwards very slowly. At one point he lost his hold on his camera. It went flying over the edge, crashing down and disappearing into Yosemite Valley. I wondered what some tourist far below would make of the mangled camera he might come across near the shores of Mirror Lake.

The rest of the descent to the main trail was uneventful; I paused along the way at a very refreshing little spring by the side of the trail. There a group of young people offered me a most welcome energy bar after hearing of

my adventures the previous night. At 11.10am I reached the Half Dome trail junction (22.3 miles from the start), recovered my pack from behind its log and followed the steep, rocky trail down 2.2 miles to the floor of Little Yosemite Valley (6080ft). There I rested by the gentle and serene Merced River that winds through the floor of Little Yosemite Valley much as it later winds through the main valley. I also filled up with enough water for the rest of the day. The trail then follows the course of the Merced - first along its passive course. Then, about a mile from where it first came down to the valley floor (and at 25.7 miles from start), there is a sudden and precipitous drop down a dramatic cleft to the left of main course of the river. A short way down this steep descent, the spectacular Nevada Falls come into view though you can hear them before you see them. The crashing spray and thunder of the falling water reverberates the rock and generates a localized rainfall. It is a spectacular sight.

Below the base of the Nevada Falls, the trail crosses a bridge over a dramatic water chute. From there, on the left side of river, it descends past a lovely little lake, a great place for a swim. Many tourists from the valley ascend this far and so the crowds increase as you proceed downward toward the valley. Shortly you arrive at the top of Vernal Falls. The route around this obstacle is a steep staircase along the cliff wall on the left. A restroom and water fountain at the base of this descent cater to the now excessive crowds. Another bridge leads back to the right side of the canyon for the last leg down along an easy asphalt trail to the valley floor at Happy Isles (4035ft and 28.8 miles from the start). There I crossed a bridge to the left bank, passed the Happy Isles Shuttle Stop and hiked along the road toward Curry Village and the hiker's parking lot. It was 3.15pm when I reached the car.

As I drove back through Yosemite Village on my way home past teeming tourist crowds, I could not help but reflect on the contrast between the wilderness of bears and awesome rock monuments with almost imperceptible human presence and the crowds lined up in the Village hamburger joint. How can we possibly protect the beauty of the world in a truly democratic way. I am not sure I know the answer to that Yosemite dilemma; I am not even sure there is an answer.

Chapter 22

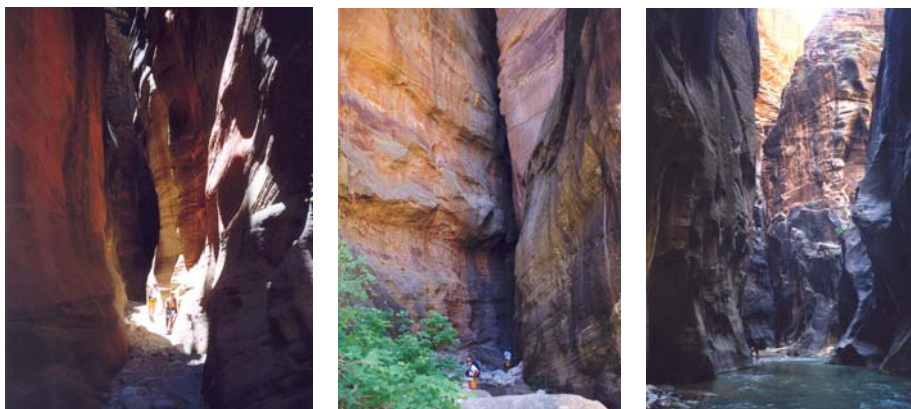
ORDERVILLE CANYON

“Nephi Johnson followed the Virgin River with his Indian guide and reached Oak Creek, above the present site of Springdale, where the Indian stopped and refused to go any further. Wai-no-pits, he said, might be found there in the shadows of the narrow canyon ...”

*From “A History of Southern Utah and its National Parks”
by Angus M. Woodbury, 1950.*

Like its larger sister, the North Fork of the Virgin River, Orderville Gulch begins high on the 7000-8000ft Markagunt Plateau just outside Zion National Park in southwestern Utah. As it flows west it drops into a narrow slot canyon cut up to 1000ft deep into the Markagunt and creates Orderville Canyon, one of the spectacular gorges of Zion National Park. In several places the slot narrows to a water-filled 10ft wide with walls towering over 1000ft above you. Later it joins the North Fork of the Virgin in the middle of the Park just at the lower end of the famed Zion Narrows, providing a taste of what it is like to hike those Narrows.

To reach the starting point for this hike, drive east out of Zion National Park on Highway 9. About 2.3 miles past the entrance station, turn left on a good paved road at a point just beyond the top of a small rise. There is a sign indicating the North Fork. About 5m from the turnoff, the asphalt ends and you continue on a dirt road that is fairly good when dry. It may, however, be impassable when wet. About 11.5 miles from the turn-off, the dirt road crosses Orderville Gulch, after descending alongside that distinctive feature. Turn around here and return 0.8 miles to where a narrow dirt road proceeds off to the west at the crest of a small hill. About 100yds down this road you come to a broad corral surrounded by a wire fence. This is where you should park if you are driving a two-wheel drive vehicle. A gate leads to a rough and steep dirt/rock road that descends to the bottom of Orderville Gulch. This is route



Left: Orderville Narrows. Middle: Orderville Narrows. Right: Zion Narrows just below the junction with Orderville Canyon.

of the hike though four-wheel drive vehicles can proceed along it also. Note however that the road is easier to descend than to ascend. About 0.7 miles from the corral you reach the flat bottom of the gulch; here the road crosses Orderville Creek and follows the right bank on a flat bench for perhaps 0.5 miles. It then crosses the stream again and proceeds for a similar distance on the left side. The dirt road ends in a broad, flat clearing in the low brush where four-wheel vehicles must stop and park.

From the clearing (elevation 5700ft), a rough trail descends to the creek and follows the almost-dry streambed for about 0.5 miles as it winds its way across a broad, flat bottom. About 20min from the start at an elevation of 5360ft, there is a dramatic change in the landscape when you arrive at the sudden and steep 120ft dryfall that marks the beginning of Orderville Canyon. You may choose to follow the course of the streambed and rappel down the dryfall in two or more stages. Or you may choose to rappel down an even steeper chimney about 60ft to the left of the main streambed. But this is a long hike and the much simpler and faster route is to backtrack and find the use trail about 50yds to the left of the top of the dryfall. We came upon this automatically by following the use-trail on the left bench. (An unusual conifer stands beside the trail just where it reaches the lip.) The use trail then descends by a steep dirt trail to the canyon bottom that is narrow for a brief stretch but then broadens to provide fast and easy going in a rapidly deepening canyon. This is a lovely walk on a bright summer morning and the colors of the trees, rocks and sky are heightened by the crystal air of this high plateau country. About 0.6 miles downstream of the dryfall (and 40min from the start) you will encounter Birch Hollow, a sculpted rock-cavity on the left with a spectacular dryfall.

The easy going continues for another 2.2 miles, the canyon bottom having only a gentle grade. The canyon walls continue to steepen and, in places, they begin to close in. Then at one particular narrows the first substantial obstacle is encountered, a large, canyon-blocking boulder with a steep 15ft drop on the

downstream side. It is wise to use rope or webbing to rappel or downclimb this drop. The narrow slot on the right can be chimneyed fairly safely given boots with reasonable traction but some protection or belay would be wise. When we came this way the bottom was covered in a layer of very gooey mud; we also delayed about 40 additional minutes in order to help a group of eight young people descend safely. Undelayed the bottom of this obstacle should be reached about 3hr from the start. The going downstream remains easy for the next two miles and somewhere along this stretch we stopped for lunch. Then, roughly 3hr 45min after setting out, Bulloch Gulch enters on the right and brings with it enough water so that, downstream from the confluence, a stream runs in the canyon the rest of the way. Downstream of Bulloch Gulch, the canyon closes in again to a spectacular narrows crossed by fractures in several places. Then, a mile below Bulloch Gulch, a second fantastic obstacle presents itself. This consists of two huge chockstones, one of which blocks the canyon and requires another downclimb or short rappel. The other huge chockstone is lodged directly overhead forming a massive arch. There is even a tree growing on top of this upper chockstone. We used webbing to rappel about 12ft down the slot on the left though the falls on the right could also be downclimbed using the logs wedged in its face.

At this stage, you enter another spectacular narrows. The going is also harder between here and the Virgin River for you will need to negotiate a series of small waterfalls and pools some of which require swimming. Here we began to encounter groups of young people who had come up from below to enjoy the pools and falls. A short distance downstream of the huge chockstones the canyon narrowed further and we had to chimney down a small waterfall to the right of a large boulder. Then a series of pools and small waterfalls required chest deep wading and even some swimming. Beyond this we arrived at the top of an 8ft waterfall dropping into a deep pool. We jumped into this pool since others were present to confirm the depth; if this had not been the case we would have had to arrange a belay or rappel. A similar obstacle occurs a short distance further downstream but here it is easier to slide down from the shelf on the left into the end of the pool.

A series of more modest pool and falls obstacles are encountered before a last stretch of narrow and deep slot canyon. This leads directly to the junction at 4568ft (and 5hr 30min from the start) with the awesome Zion Narrows where the North Fork of the Virgin River flows through an incredible 1000ft slot canyon whose bottom is filled with Virgin River cascade. Stop and savour this awe-inspiring cathedral of a place. Though you will only travel the last 100yds of this great gorge, it provides a taste of the Zion Narrows adventure described elsewhere in this journal. The exit of the true Zion Narrows is just about 100yds downstream of the Orderville Canyon confluence. Then the canyon broadens a little and pretty wooded benches appear again. Sunlight penetrates and it is a beautiful hike downstream to the point where the concrete Riverside Walk begins. By this stage there are usually crowds of people enjoying the canyon and the adventure of a short hike up into this wilderness. The terminus of the concrete and asphalt Riverside Walk is usually crowded with people peering

up into the drama of Zion Narrows. From there it is but a 20min walk to the parking lot at the Temple of Sinawava (elevation 4411ft) and the conclusion of this marvellous adventure. The end should be reached about 7hr after setting out from the mesa now high above and far behind.

Chapter 23

KITADAKE RAIN

*“... nearly every one who tries his powers
touches the walls of his being...”*

From “Third Study. Backlog Studies” by Charles Warner.

Though I cannot recall exactly when I first met Yoichiro Matsumoto, I do know I recognized early that this was a very accomplished but very private man who had taught himself to interact with the world despite a natural reluctance to do so. Perhaps because of his diminutive stature he possessed an intense drive for perfection and a compulsive determination to succeed, I suspect not for the recognition it would bring but rather for the security of controlling his environment. This is a story about Yoi and about myself and the elemental way in which relationships can undergo transformations in the face of adversity. The stage on which the play took place was the second highest mountain in Japan. Much less well known than the taller Fuji, Kitadake (translated “North Peak”) in the Southern Alps of Japan is much steeper and more demanding than its larger sister. The 10474ft summit (the highest non-volcanic peak in Japan) sees only serious mountaineers and far fewer visitors than crowd the summit of Fuji.

Yoi and I had become professional friends during years of attending the same academic symposia and conferences. We had worked in overlapping areas of scientific research and so developed the respectful relationship that naturally derives from the mix of cooperation and rivalry inherent in such a scientific community. His work was (and is) characterized by considerable insight into physical principles combined with great mathematical agility but most of all by Herculean effort and intense drive. Moreover, in the international business of scientific research, it is essential to acquire more than proficient skill at the English language both in verbal and in written communications. Yoi’s natural shyness was a drawback in this respect, but he had through great effort develop excellent verbal and writing skills. He was also meticulous in the way in which he dressed. And so the impression that this well-dressed, well-spoken, and

supremely composed little man would exude was the epitome of elegance. At the same time the body language said “private - stay your distance”. Some of this was, of course, a part of his Japanese culture; but there was also a compulsive self-protection mechanism at work. I developed considerable respect for Yoi and his work and called him a friend. He had been very kind to me during a number of visits to Japan and I had spent many enjoyable days at his institution, the University of Tokyo. We had even day-hiked together in Tanzawa Quasi-National Park. However it was not possible for me to claim I had ever seen beneath his shell.

In the summer of 1999, I was once again bound for Japan to visit several universities, to present a number of scientific talks and to revisit old friends. I had a free weekend and Yoi had volunteered to arrange a weekend hike for me since my predilection for such activity was now well known among my professional friends. It was rumored that several of his students would be accompanying us and that we would be climbing Kitadake. I did not pay too much attention to the plan since, knowing Yoi’s perfectionism, I was sure that the arrangements would be precise and meticulous. But I did come well-equipped with my own hiking gear and so was prepared for almost all eventualities when Yoi and I got together on the afternoon of Friday, July 2, 1999, on the campus of Tokyo University. There I also met the other two hikers, a graduate student of Yoi’s by the name of Nobuhiro Yamanishi and a former student called Toshiyuki Hasegawa. I had met Yamanishi several years previously; he had spent some years during his youth living in San Francisco and so spoke excellent English.

In the late afternoon, we loaded all our gear into Hasegawa’s new station wagon and set off for the South Alps. On the super highway leading out of Toyko and amid the hectic Friday afternoon traffic, the conversation naturally turned to Kitadake, the mountain ahead of us. From past conversations, I knew that Matsumoto had been a very active and determined mountaineer in his youth. I had also heard brief reference to a major accident he had experienced in those days. I now learned that the accident had occurred on the slopes of Kitadake. Yoi had been close to the summit of Kitadake when he had fallen nearly 100ft down a steep rocky slope, severely injuring himself. His fellow climbers had sought help from the mountain hut (“Katano-koya”) not far away at the 10000ft level and Yoi had been stretchered back to that hut. Fortunately it was equipped with a telephone that was used to contact Yoi’s father. By pulling some special strings within the Japanese military, the senior Matsumoto arranged a helicopter evacuation for his son. The helicopter landed on a narrow platform beside the mountain hut and carried Yoi to much needed medical attention. Now, in the darkness of the back of Hasegawa’s car, I got the impression that Yoi had unfinished business with Kitadake.

We drove due east, pausing for dinner in a roadside restaurant and then pressed on in the summer darkness. Leaving the super highway at Kofu, a short drive on surface streets brought us to the base of the precipitous South Alps and we began to climb up a steep shallow valley. The tortuous road passed several resorts before arriving at our destination, a traditional Japanese ryokan and hot springs resort known as the “South Alps Hot Springs Onsen Hotel”

(“Ashiyasu Onsen”). After check in we deposited our gear in our tatami room before seeking out the onsen or hot springs. It is a Japanese tradition that I now thoroughly enjoy. Then we laid out our bedding and went to sleep.

We rose at 3.00am for Yoi had determined on a very early start for reasons that were never completely clear to me. We arranged our gear and packed our backpacks preparing for a two day hike. Then we took to the road in darkness, continuing up the narrow winding road as it switchbacked on up the steep and shallow valley. I learned later that this well-known scenic route is called the South Alps Super Rindo Road. As it neared the ridge-top it proceeded through a very narrow, misty tunnel and emerged into the next valley - the Norogawa valley, a larger but equally precipitous gorge. The road continued north high on the east side of this gorge, winding tortuously in and out of side gorges and plunging frequently into narrow tunnels. Proceeding upstream, the road eventually reached the main river and its terminus at the small resort of Hirogawara or Hirokawara (“Wide River Place”) at an elevation of 4985ft. We parked near a small inn and, because of the rain, prepared our breakfast in the shelter of its porch.

As we were making our way from the overnight hotel to Hirogawara, it became clear to me that my hosts (and in particular, Yoi Matsumoto) were quite concerned that the rain that had already begun and that was forecast to continue over the weekend would force the authorities to close the Super Rindo Road. In fact we had passed the open gate on the road near the top of the first steep valley. And so the fear of not reaching Hirogawara had passed. However, it was now replaced by the fear that the road would be closed when we returned from our hike on Sunday afternoon. I soon realized that the consequences of the road closing were beginning to prey on Yoi’s mind. On Monday, I was scheduled to give an important lecture at another university in Tokyo and if Yoi’s arrangements were to cause me to fail to show up for that engagement he would suffer considerable embarrassment and “loss of face”. Each time it began to rain harder I could see additional anguish pass across his face.

After breakfast (about 5.15am) we set out on our hike despite the heavy rain. Like the others, I was reasonably well equipped for this eventuality though my Gore-tex trousers were old and beginning to be porous. The fulsome river that we crossed by footbridge was an ominous sign for the future. But the forest of beech, fir, spruce and hemlock was fresh and green and beautiful and it was a pleasure to be on the trail again despite the rain. We traveled up the right bank for about 10min before recrossing the river and arriving at a trail fork (5480ft) at 5.50am. Here we consulted the maps and talked with another hiker who had paused to rest during his descent. The conclusion was that the trail up the valley may have suffered considerable slide damage during the recent downpours and so we should take the right fork up the steep lateral ridge above us. It was a long tough climb up a steep, tree covered ridge that seemed to be held together by a profusion of tree roots. These provided an almost continuous supply of hand holds and footholds though, in places, the slope was so steep that a rudimentary human-made ladder had been installed along the trail. Finally, about 7000ft the trail leveled out and contoured to the left along the side of the

ridge. After passing above several ominous landslide tracks, we arrived at the Shirane-oike-koya (7200ft) at 7.40am.

Until quite recently a large log hut had formed the central structure of the encampment on this shoulder of the mountain. However, several years ago a landslide had wiped out the log hut; now a small temporary shelter serves while the larger hut is being rebuilt. Smaller huts are clustered around the main building and serve as storage, latrines, etc. A tarpaulin shelter in front of the temporary shelter provided us with some relief from the continuing rain. From that vantage point we had a clear view of the steep snow chutes to the south that extended up to the summit ridge of Kitadake. One original plan had been to climb one of these chutes and for that reason I had brought my crampons. In the miserable weather we had encountered that plan had been abandoned.

Soon we set out again and after a few yards passed the small pond that gives its name to this shelter. Several small tents were pitched near the edge of the pond; they looked quite forlorn. But the rain had begun to ease, perhaps because we were climbing through it. The trail switchbacked steeply up the landslide track where the trees were smaller and less dense. Nearing the head of the track, the trail contoured to the right and climbed the steep slope toward the apex of the ridge that would take us to the summit. About 2000ft above Shirane-oike, we arrived at a trail junction where another trail joined from the left. This was the tree-line elevation and from here to the top the landscape was mostly jumbled rock. A short distance beyond the trail junction we achieved the ridge and the trail turned left to follow its apex. Now the wind was much more intense, gusting to about 40mph. At least the rain was minor.

Following the steepening ridge for about 30min, we finally (at 10.40am) reached the Katano-koya or Shoulder Hut (9720ft) on a slight projection from the side of the mountain. The wind howled quite fiercely and we were beginning



On the summit of Kitadake.

to chill and so it was a relief and pleasure to take refuge inside the warm and dark hut. The entry area was floored in stone and a short corridor between a makeshift store and the kitchen led to the central area surrounding an old rusty, wood-burning stove. There were benches immediately around the stove with an access space around the benches. The rest of the space around and behind the center space was a platform raised about 2ft above the stone floor. In the interior this was covered in tatami mats for sleeping space. Nearer the stove space it was covered in tarpaulin to allow hikers to place their wet gear on it. Moreover several smaller kerosene stoves up on the raised flooring provided additional warmth. A staircase led to an attic space and an additional sleeping area. The windows of the hut were small and mostly blocked off. The walls were covered in a makeshift collection of hiking maps, photographs, newspaper articles and other mementoes. It was a rustic, warm and pleasant refuge. Two men, one of whom was the owner (or operator), sat around the hot rusty stove and chatted amiably. We shed our wet outer garments and hung them up to drip and dry before joining them on the benches around the stove. Once we were warmed we set up our lunch and, as we ate, tried to decide what to do. Whether to plan to spend the night in the hut or to descend during this same day. My fellow hikers were inclined to descend - they feared the continuing rain would cause the closure of the Super Rindo Road thus trapping us, possibly for days. They wanted to get down the road while it was still open. But that would mean a very long day of hiking. We had to make the decision here in the hut in order to know what to do about the few dry clothes each of us had in reserve. The decision was made to descend and so we put on our dry clothing.

At 11.55am we emerged from the hut and set off for the summit, leaving our packs at the shelter. Emerging into the bleak day, we were glad to find the rain and wind had eased a little. The ascent route followed the sharp rocky ridge and, in places, required climbing over loose and exposed rock. The surrounding clouds blocked off all of the view that, I was told, could be spectacular on a clear day. We passed the tops of several snow chutes on the left.

At 12.25pm we arrived at the 10474ft summit of Kitadake, marked by several official signs, a number of cairns and a small Jizo statue adorned with the usual, red-cloth offerings. Having labored so hard against the elements we all felt considerable elation and congratulated each other while we took photographs through the mist and the fierce wind. I particularly enjoyed the unusually unrestrained delight on the faces of my hosts.

But we could not afford to dally and soon headed down again, reaching the Katano-koya hut at 1.05pm. There we could not resist another rest in the warm but now crowded interior of the hut; a large group of hikers, male and female, were drying out as we did before striking out for the summit. After about 10min we gathered ourselves, hoisted our packs and set off down the mountain. Yoi was still strong and led most of the way down the seemingly endless switchbacks on the descent to the Shirane-oike hut. The rain was not heavy and the wind eased once we dropped below the summit ridge. About 2.55pm we reached Oike-koya and paused only briefly for I especially did not want to allow my legs to stiffen. And so we headed on to the top of the steep, root-woven descent ridge. Here it

was harder going and necessary to downclimb the roots and ladders with care. Moreover, it began to rain hard so that not only did the trail become a stream in places, but it was hard to keep the rain out of one's eyes. I pressed on ahead as the others began to weaken with exhaustion. After all, we had been hiking continuously for almost 11hrs in quite adverse conditions on a rugged trail. When we finally reached the bottom of the steep ridge, the trail to Hirogawara was truly a river and I was entirely focussed on reaching the shelter at the end of the trail.

The others were now out of earshot and I paused for some minutes at a picnic shelter to allow them to catch up. I could see the car at the trailhead just about 50yds ahead. As Yoi approached, I was deeply struck by his body language and facial expression. Struggling to put one foot in front of the other, he was truly at the end of his resources - and at the end of his ability to hide it. His eyes met mine as he expressed an admiration for my strength. For the first time in our relationship, he exhibited a sincerity free of reserve. In that moment we gained a mutual respect that, I doubt, we would have achieved under any other circumstance. He accepted for the first time my physical strength and resolve, the attribute I had long accepted and admired in him. And I saw for the first time in him, a willingness to show his own frailty and humanity. I felt an affection for him that would not have been possible before. It was a special moment with an irreversible impact.

But it all passed in a moment, and we trudged on to Hirogawara as the rain poured down. It was 5.00pm and we had been hiking almost continuously for about 12hrs. After some debate we decided that any attempt to dry ourselves at the trailhead inn would be futile and so we tried to load our gear and ourselves into the car without soaking the interior.

As we drove back along the Super Rindo Road, waterfalls raged all around us and the whole landscape seemed to be in liquid motion. Arriving at the tunnel, we could not help feeling fortunate that we had escaped before the road was closed. Emerging from the tunnel, we descended toward the South Alps Hot Springs Onsen Hotel where we had awakened that morning. The rain eased somewhat and so both the weather and our spirits lightened as we pulled into the parking lot. The hotel management were kind enough to allow us to use the hot springs once more and so we dug out the few dry clothes that remained and repaired to onsen. After such a physical ordeal, the baths were truly delightful and we lingered long before packing up and beginning our journey back to Tokyo. When we finally parted in front of my hotel amidst the neon of Shinjuku, we exchanged the kind of special goodbyes that only occur at the end of a shared ordeal.

Chapter 24

THE LILIES OF CHOKAI

*“Both heaven and earth
come from one’s own heart”*

Traditional Shinto saying.

Mountains have always figured large in the religious and social landscape of Japan. Perhaps this is so because in such a densely populated yet mountainous country where the flatland had all been developed for agriculture, the only wilderness left in which to seek privacy for meditation and prayer was in the mountains. Moreover, it was evident that the mountains brought the rain that was so important to the crops, particularly the rice. And so even in the ancient shamanistic belief system known as Shinto the mountains were believed to be the home of the spirits and the place where dead souls went to rest.

Then, in the sixth century came a major influx of Chinese religions and traditions, both Taoist and Buddhist. Shinto beliefs became inculcated with these more sophisticated philosophies and the ancient sacred mountains evolved into refuges for Buddhist monks and hermits. With the growing reputation and influence of these men, their mountain refuges and temples naturally became pilgrimage destinations and venues for annual religious retreats. Sects evolved that combined the ancient traditions with Buddhist beliefs, most notably the movement known as Shugendo or the way (do) of mastery (shu) of extraordinary religious power (gen). Shugendo traces its origin to a legendary ascetic called En No Gyoja who lived near Kyoto during the Nara Period in the late 7th century. It teaches ascetic practices that are to be conducted upon certain mountains and lead to magic religious powers including spirit possession, exorcism and faith-healing. Its leaders are regarded as living “kami” or Buddhas and its followers are known as “yamabushi” (wandering mountain ascetics). To this day, yamabushi, dressed in flowing pantaloons and checkered smocks, make annual pilgrimages on many sacred mountains, visiting the shrines at each of the ten stations (reflecting the ten precepts of Buddhism) on the way up the



Left: Ascending the first snow field. Right: The summit of Chokai.

mountain and practicing a wide array of purification formulas and traditions. When they descend from the mountain they visit their friends to administer blessings from the mountain or perform special services of healing or exorcism.

The religious goals are as diverse as their organization and amount to the application of religious magic to almost any human need. Because of its simple shamanistic roots, its loose organization and lack of specific textual doctrine, Shugendo had a strong appeal for the ordinary folk and became very popular throughout Japan from the 12th century onward. Especially in the north, almost all village shrines came to be served by Shugendo priests.

One of the great attractions of these oriental religions is that they are largely inclusive. This stands in marked contrast to the exclusivity of many western religious sects. The inclusivity means that the shrines at regular intervals on the trails up the sacred mountains (and by extension the less sacred ones) welcome all comers and a tradition has developed of trying to accommodate any and all travelers who come that way. Thus today, the shrines or stations on the popular mountain trails largely serve the secular purpose of providing an overnight rest stop for multitudes of hikers with little or no religious purpose. For a western explorer they provide a fascinating insight into Japanese culture, society and traditions.

Some of the great volcanoes have an association with one particular segment of Japanese society and such is the case with Mount Chokai, the bird (cho) sea (kai) mountain. A great stratovolcano that has erupted 30 times since 573 A.D. (most recently in 1974 when the eruption lasted 2 months), Chokai-san lies close to the Japan Sea in a region of northern Honshu known as Tohoku. The shadow that it casts on the Japan Sea is a famous sight known as Kage Chokai. Because of this proximity to the sea, Chokai is the abode of deities who control navigation and the safety of seafarers.

Chokai-san lies on the border between Akita prefecture to the north and Yamagata to the south. In 1704, the peak was the stage for a local dispute

between the Yashima clan from Akita and the Shonai clan from Sakata in Yamagata prefecture. The Yashima claimed the Shonai were infringing on their rights. But the Edo government, no doubt influenced by the fact that the Shonai were ten times larger in terms of rice production, ignored the Yashima suit. The temple at the top is said to have been originally dedicated by En No Gyoja to “Chokai Daigongen”, an avatar. The present O-monoimi jinja or shrine at the top was originally located at the seventh stage of the mountain, Nabemori. Up until the Meiji restoration, temple construction was undertaken by both sets of believers. In the Meiji Era, however, the Chokai temple was taken away and the O-Monoimi Shrine was built.

* * *

The narrow road winding up the flank of the massive mountain was dark and deserted on that August morning of the year 2000 as we drove toward the trailhead before dawn. The eerie shadows reminded me of a story I had read in the Mainichi Daily News just a few weeks earlier:

Mainichi Daily News, Monday, June 5, 2000:

BEAR FATALLY MAULS BAMBOO PICKER IN AKITA

Yashima, Akita - A hike on a mountainside here turned tragic after a man picking bamboo shoots was mauled to death by a bear, police said.

Police officers found the body of 62-year-old Shozaburo Kamata on Mount Chokai at around 6:50am on Sunday. The wounds to his head and arms bore bite wounds and claw marks, and investigators discovered what appeared to be the tracks of an Asiatic black bear near the body. Police have concluded that Kamata died of massive loss of blood.

Officers began searching Mount Chokai on Saturday morning after another man gathering bamboo shoots in the area reported seeing a body lying on the mountainside.

Kamata's family told police that he often went to Mount Chokai to pick bamboo shoots.

The whereabouts of the bear are unknown

Maybe he was just waiting at the trailhead for the next yamabushi - or, better yet, a juicy gaijin!

We were Yoichiro Matsumoto, Takashi Tokamasu and myself. We had set out from Sendai for Chokai Quasi-National Park in Yamagata prefecture the preceding day and had stayed overnight at a guest house or ryokan called Chokai-sanso (“Chokai Cottage”) situated at the base of the mountain, close to the starting point for the Yunodai trail up the mountain. The Yunodai hot springs were one of the featured attractions of the guest house. We had left the inn (elevation

1640ft) in the pitch dark and started up the steep winding road, leaving the developed land behind as we climbed through thick low forest, mostly bamboo but increasingly mixed with deciduous trees. The demons vanished as dawn broke over Tohoku. Soon the sunrise blazed crimson and orange across the mountains of northwestern Honshu and promised a glorious day on the great mountain. After a 20min drive we came to the parking area at the end of the road at an elevation of 3910ft; not much here but a small structure for sightseeing obviously constructed to function in deep snow. And we could now see a number of substantial snow fields higher on the mountain.

By the time we left the trailhead the red streaks in the eastern sky were turning to orange. The roughly paved trail climbed steeply through thick, low forest. After just 15min we came to a clearing at 4167ft with the substantial, two-storey Taki-no-koya or “Waterfall Lodge”. Interestingly, there was another entrance door at the second level for use under deep snow conditions. This early in the morning it seemed deserted. The benches out front provided a convenient place for us to enjoy the Japanese breakfast that Matsumoto had brought for us, complete with hot coffee.

A substantial stream runs close by Taki-no-koya, and the trail beyond the lodge followed this stream for a few hundred yards to a small snow field. The stream had cut a curious ice-tunnel under the snow field that I had to investigate. Higher up, the water cascaded over a steep rim creating a lovely waterfall. The trail switchbacked through low scrub up a steep and rocky trail, eventually cresting this rim. Beyond it, we found ourselves on a large shoulder on the mountain with an expansive meadow of low bamboo scrub interspersed with grass. Here, after 1hr of hiking, we came to the second lodge, Kawara-juku or “Riverside Inn” beside the stream at 5052ft. It was a more modest, single storey wooden structure containing a tatami sleeping area and a small shrine. This was Shichi-gome, the 7th station on the Yunodai trail.

We stopped to rest on the veranda in front of the inn. The sun seemed to be warming us all in preparation for the next obstacle, visible at the end of the meadow. There on the southern face of Chokai, were two large snow fields or small glaciers. Leaving Kawarajuku, the trail followed the stream along to its



Left: On the summit of Chokai. Right: View to the east.

origin, the base of the lower and larger glacier. We stepped gingerly onto the ice surface testing the footing. Here, near the bottom, the slope was gentle and the ice surface was sufficiently dirty and dimpled to provide adequate footholds and friction. Thus we climbed more easily than I expected up the lower slopes of the glacier. When it steepened higher up we moved to the rocky terrain on the left. We passed low woods off to our left, known as Bosa-mori or “Bosa’s forest”. Climbing to where the slope of the glacier eased again, we resumed our hike on the ice and crossed to the right side where the trail in the rocks climbed past the head of the snow field. I noted an interesting yield line or trough across the snow at the top that may have been where the snow began to move. From there, the trail traversed left to another smaller glacier known as Shin-ji-yokee, or the heart-shaped snow field. This we quickly crossed, climbing to the right and coming to a steep, rocky section of trail through thick low brush. The route here is called the thistle trail; it climbs to the top of the ridge that we had been ascending for the past hour.

I pause here to try to describe the geometry of the summit area of Chokai. Unlike the boring cone of many volcanoes, the rugged top of Chokai is sliced through by a great trough that divides the summit pinnacles into two groups and then curves down the side of the mountain, emptying into the foothills to the west. The summit block itself is thus separated by the trough from the great sloping ridge on which we now stood after a 2hr 45min hike from the trailhead. Here at 7000ft the crest of the rim is called Fushi-ogami-dake or “Deep Pray Mountain” presumably because the scene revealed when you attain the ridge is, indeed, awe-inspiring. This point is also marked on the map as the site of Ku-gome, the 9th station, though there was no structure to be seen. But the view of summit was spectacular, the great trough with its snow field curving down from the peak spires and passing below us. In the distance, below the summit block and on the north slope of the trough, we could see the famous temple.

From Ku-gome, the trail follows the south rim of the trough on its way toward the summit. The map says one of the projections from the rim is a peak, Gyoja-dake, named for the famous ascetic but we passed this unknowingly. A 30min hike up along the rim brought us to a trail junction (elevation 7140ft) where we left our packs before the short, 10min walk on up the rim to its highest point. This 7316ft peak is called Shichi-ko-san, or “seven high peaks”, and from it you get a great view across the head of the trough to the collection of rocky spires that make up the summit block. It had taken 3.5hr to climb from the trailhead to here.

From Shichi-ko-san, we returned to the trail junction where we had left our packs and then followed the steep trail equipped with chains down the side of the trough to the ice field at the bottom. Crossing the snow field it was but a short climb up the other side to the temple (elevation 7040ft). Again we deposited our packs and made our way up the steep rocky trail toward the summit. As we neared the top the trail deteriorated to arrows painted on the rocks and some steep bouldering was needed in order to reach the base of the pinnacles on the summit. Arrows pointed to the tallest spire, that could not have otherwise been

identified from several equally impressive monoliths. A final section of rock climbing took us to the 10ft by 10ft platform on the top of the highest pinnacle. This summit of Mt. Chokai is called Mount Shinzan (7335ft), or “New man (peak)”, perhaps because it rose to be the highest within the memory of man. It had taken us 4hr to get to the summit.

The drop-off around the summit pinnacle lent added drama to the spectacular 360 degree vista that greeted us at the top, the Japan Sea to the west, and range after range of the mountains covering northern Honshu off to the east. The summit was equipped with the usual small shrine, a carved stone altar of considerable weight. It must have been quite a feat to carry it all the way up the mountain. Offerings on the altar included not just the usual coins but unopened pieces of wrapped candy including chewing gum! Around us were other pinnacles almost as high and we climbed one other to the west of the summit. Too soon it was time to move on and we quickly descended back down to the temple.

From the temple we began our descent by a different route, taking the trail that descends from the temple along the north slope of the great trough. This eventually dropped into the bottom of the trough and followed the snow field that fills it. Near the bottom of the snow field the trail contoured up the south wall to the same rim we had ascended early in the morning but now at a lower elevation. We joined the trail along the rim at a place called Shime-kake, “sacred straw festoon rack” and then continued down along to a saddle on the rim ridge where the trail forked. Here we forked left, leaving the rim and traversing across to a crater lake called Tori-no-umi (“Bird Lake”) or Chokai-ko (“Chokai Lake”). We reached here 6hr 45min from the start.

Our water supply was beginning to run low and we were anxious to descend to the stream we thought we detected some distance below us. Consequently we took just a brief look at the lake lying some 100ft below us in an old crater and then returned to our trail. A steep descent of several hundred feet brought us to the base of an ice-field where the snow melt formed a crystal clear stream. Here we enjoyed a marvelous Matsumoto lunch, smoked salmon on French bread, tomatoes chilled in the stream, cheese, mushroom soup, and chilled oranges washed down with ice-cold water and later by hot coffee. It was so good I think I dozed off for a few moments, lying in the soft meadow grass under a warm sun.

About an hour later, we stiffly resumed our descent quickly reaching the boulder-filled stream bed that runs through the big valley we were now following. Forking left at a trail junction, we came to a relatively flat valley bottom with rolling parkland and a network of streams. Around us were patches of low bamboo scrub and large open meadows with short grass, carpets of flowers and shallow meadow pools. It exuded a sunlit serenity in contrast to the raw mass of the stratovolcano now high above us. But most special were the forests of flowers, saffron lilies and purple foxgloves twinkling in the mountain air. The lilies were the color of sun and the color of monks. It seemed so natural that they should point the way to the house of contemplation high above us.

Day-dreaming our way across this land, we passed another trail junction with

the picturesque name Ja-seki-ryu-bunki or “Snake stone stream fork”. From there we veered left and traversed across open meadows toward the base of a long high ridge to the east. At the base of this ridge, the trail left the meadows and climbed up a steep rocky stream bed toward a saddle on the ridge. Near the top the saddle broadened into a flatter meadow area, again with grassland, flowers, pools and streams. Off to the right was a forest named Gassan-mori for the sacred mountain, Mount Gassan (“Moon mountain”) some distance south of Chokai. Gassan had been visible to us most of the day. Cresting a few low ridges the trail brought us back to Riverside Inn about 9hr 30min after the morning start.

Other hikers were resting quietly at the Inn, enjoying the late afternoon sun and the water from the stream. The lilies were beginning to close for the night and the snow fields looked considerably colder. Hastened by the changing light, we gathered ourselves and moved down the trail we had climbed earlier in the day. Passing Takinokoya without stopping, we reached the trailhead just about 10hrs after our morning start. From there we drove back to Chokai-sanso for a most welcome onsen before returning to Sendai.

So another adventure in the land of the rising sun came gently to an end. Sometimes the journey itself, the pilgrimage, is enough for it creates a space in which to consider the world you know and your place in it. When that journey is embellished by the beauty of the mountains and the flowers, it makes it easier to find an equilibrium of the soul. And so it was with this adventure, marked by contemplation of pilgrimage and the beauty of the lilies. Of the color of the flowers and the sun.

Chapter 25

RAILWAY IN THE ETHER

*“For I dipt into the future, far as human eye could see,
Saw the Vision of the world, and all the wonder that would be;
Saw the heavens fill with commerce, argosies of magic sails,
Pilots of the purple twilight, dropping down with costly bales;
Heard the heavens fill with shouting, and there rain’d a ghastly dew
From the nations’ airy navies grappling in the central blue;
Far along the world-wide whisper of the south-wind rushing warm
With the standards of the peoples plunging thro’ the thunder-storm;
Till the war-drum throbbed no longer, and the battle flags were furl’d
In the Parliament of man, the Federation of the world.”*

From “Locksley Hall” by Alfred, Lord Tennyson.

On this, the second night of their grand adventure, they had formed the four-wheel-vehicles into a circle beside the rusted remains of an old steam engine, half buried in the sand. Making their camp here under the desert stars, they lit a fire to ward off the chill of the desert night, to focus their conversation and companionship. Talk turned from their tiny and distant homeland of Northern Ireland, to the vast and empty expanses of this Saudi nation. From the great romance of Lawrence of Arabia who wrecked that steam engine, to modern Middle Eastern politics and, inevitably in this day and age, to the wonders of computers, the internet and global communication. They reflected how search engines had allowed a connected people who had dispersed throughout the world to find each other and to communicate again though separated by many thousands of miles - even when that diaspora reached into places as remote as this northwestern corner of the great Arabian desert. Justin listened as his friend described how he had recently used a new search engine to rediscover a great

friend from his college days. He resolved to try that when, after this adventure, he returned to the hospital in Riyadh where he was currently employed. But, for the moment, the present adventure was all-consuming and many hundreds of miles of the historic Hejaz Railway would challenge them in the days ahead. For Justin and his friends had set out to follow the route of the Hejaz Railway all the way from Tabuk to Medina, a distance of about 700 miles across one of the most forbidding deserts in the world. The rails and even the sleepers had long ago been borrowed for other purposes, but the raised embankment of gravel and rock along which the railway ran is still extant and can be followed in four-wheel-drive vehicles.

The Hejaz Railway was originally built to transport Islamic pilgrims from Damascus to Medina. For untold centuries before, the only method of travel was by camel caravan and the journey would have been arduous and dangerous. The one-way journey alone would have taken about two months. Travel through winter's freezing temperatures and torrential rains, or through the scorching heat of the summer would have been unavoidable. Settlements along the way were sparse and hostile tribes, no doubt, compounded the difficulties. But around the end of the 19th century, the Ottoman empire that dominated the region north of the Arabian peninsula and battled the Arab tribes in an effort to expand into the great desert, raised about eight million pounds from sources such as the Turkish sultan Abdul Hammed, the Khedive of Egypt, and the Shah of Iran to allow construction to begin. That construction posed multifaceted challenges. The engineering problems alone were considerable, since the ground was solid rock in some places, soft and drifting sand in others. Moreover, torrential rain storms would occasionally create flash floods, wiping away bridges and banks and causing the line to collapse. Yet most of the year water was in precious short supply. In addition, the construction crews had to contend with open hostility from local tribesmen and from camel caravan owners whose livelihood was clearly threatened by the railway. Thus most of the construction and maintenance of the line became the responsibility of the Turkish army. Of course, that was part of the Ottoman strategy for the railway would allow the empire to exert a control over the region that was otherwise impossible.

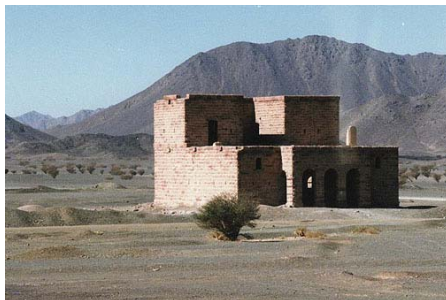
The railway was finally opened in 1908 and business boomed in the next few years; the number of pilgrims taking the train mushroomed from 30,000 in 1912 to 300,000 in 1914. In addition, the Turkish government was able to transport a substantial army into the heart of Arabia. With the outbreak of the First World War, the pre-existing struggle for dominance of the region between the Ottoman and British Empires, flared into open aggression. Recognizing the strategic importance of the railway (as well as its vulnerability) the British encouraged the local tribes to cripple that supply line. The most famous instigator of this activity was Thomas E. Lawrence, the legendary Lawrence of Arabia. Many of the trains he sabotaged still lie where they were wrecked. After the war, the Ottoman Empire was dismantled and, though some of the northern sections of the Hejaz Railway continued to function, the long stretch through the Saudi desert melted away leaving only skeletons in the sand. Much, however, still remains to be seen along the deserted route of the railway. The stations, built



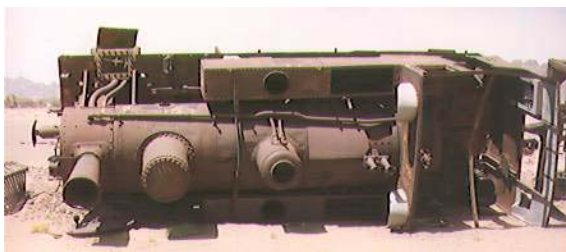
Train in the sand. Photo by Sami Sabat.



Bridge over a wash. Photo by Sami Sabat.



Left: A garrisoned station. Right: Maintenance shed at Mada'in Saleh. Photos by Galen Frysingher.



Train in the sand. Photos by Sami Sabat.

about 20 kilometers apart, served more as armed watch towers than as stops along the way. Their robust construction meant that they continue to preside over the empty desert.

Justin and his friends had resolved to follow the route all the way from Tabuk in the northwestern desert to the terminus at Medina, a distance of some 750 miles. Their four wheel drive vehicles had been “shipped” to that desert oasis, and there they began their southward journey. The going is rough but not excessively difficult since the rails were removed long ago, and local farmers used the iron sleepers as building supports and fence posts. In the grey, rocky hills outside Tabuk, the expedition first encountered the station at Al Awjariyah, a two-storey fortress built from natural grey stone. From there, following the track along the Wadi Saba for about 8 miles brought them to another station, where the track seems to double back on itself. From there it enters a deep gorge and then a tunnel. The eighth station, Ad Dar Al Hamra, is situated at the end of a wide, flooded section of the wadi and was built near the ruins of a Turkish fort that they enjoyed exploring. A subsequent station at Al Mutalla has several overturned carriages lying beside it. At Mada’in Saleh, the station is more extensive with an enormous old engine house, containing several rusting steam locomotives.

The station at Al Sawrah, about 72 miles south of Al Ula, is one of the most scenic. Situated in a wide, beautiful wadi, the three station buildings are constructed of an attractive yellow stone. Just outside the station one can see the shells of a couple of old pick-up trucks, probably the remains of an attempt to rehabilitate the railway line. Some 21 miles south of Al Sawrah twisted iron rails lie buried beside the remains of an engine, sitting bolt upright in the sand despite being some distance from the track itself. An explosion ripped open the metal at the back of the engine. Wrecked bogies, blown apart from their carriages, lie nearby. Nothing seems to have changed since 1917. It is not hard to see Lawrence’s white robes glinting in the desert sun. Further south is the site of the first mining of the Hejaz Railway at Aba el Naam.

Willie Howard and his wife Janine had journeyed from Lisburn in Northern Ireland to join Justin and two other families on this historic adventure. Thus the talk turned to their native land, to the scarred and battle weary city of Belfast. It was a joy to rekindle their origins but the talk left a shred of sadness as they remembered the lost connections with others that had left to seek a better life in distant lands. Yet there was now new hope of reconnecting. In a bygone age, the advent of railways had allowed families to reconnect; now the internet allowed one to find friends and relatives in the most distant corners of the globe.

Back in Riyadh, Justin logged onto the Internet and began his search by entering his name into the search engine Google. The number of responses was overwhelming but he soon learned to enter additional words to more narrowly focus the search. Suddenly, there it was - his father’s name, his mother’s name, even a brief mention of their lives together and of their children. There was even an old photograph of his grandmother as a young girl, standing in a portrait of his great-grandparent’s family. All on some webpage he had never seen before

on a website somewhere in the United States. In the vernacular of his homeland, Justin was gob smacked!

But he found my name at the bottom of the webpage and the name rang a bell in his distant memory. He vaguely recalled the visit many years ago that he made with his mother and sisters to a village called Magherafelt some 35 miles from Belfast where some distant cousins lived. He remembered the boys a few years older than he and the mother who had been such a good friend of his own mother many years before. Indeed his mother had acted as bridesmaid when Wilfred Brennen and Muriel Earls were married in the oncoming shadow of the Second World War. It was strange what the brain was capable of remembering when triggered by a word, a sound or a glimpse.

More importantly for the present, Justin found my e-mail address alongside my name and quickly rushed off a message through the new railway of the ether. He also e-mailed his older sister, Caroline Thorpe, who had lived within thirty miles of me for thirty years without knowing either of us was there. So it was that just two days later, I got a second e-mail from Caroline. She, it turned out, was the administrative assistant to the publisher of the Los Angeles Times. About a year earlier, the California Institute of Technology where I work, had held a reception for the publisher of the Los Angeles Times. Caroline had attended that reception. I had attended that reception. We undoubtedly saw each other at the reception. Yet we could have had no idea of each other's presence.

It seems really amazing to me that two relatives had come so close without realizing it. Instead it took a casual conversation around a campfire in a strange and remote land plus the magic of the internet for us to make contact and renew the genetic bond. Some technologies make us poorer as human beings; the internet, on the other hand, has an ability to truly enrich us.

Chapter 26

YOSEMITE'S HAUNTED CANYON

"... I will not leave my home but be with the spirits among the rocks, the waterfalls, in the rivers and in the wind; wheresoever you go I will be with you. You will not see me, but you will fear the spirit of the old chief, and grow cold."

From speech by Chief Tenaya of the Ahwahneechees.

The great glacier that carved out the spectacular monuments of Yosemite National Park began up in the high country east of the valley near the beautiful swaths of Tuolumne Meadows. Nowadays the tourist can only see a part of the glory which that process created for the road stops where the flat valley floor ends near Mirror Lake in the shadow of Half Dome. A short distance beyond that point travel along the bottom of the gorge becomes very difficult due to the ruggedness of the terrain. So difficult, in fact, that the trails terminate just a mile or so upstream of Mirror Lake and there are signs warning that travel beyond that point is dangerous. But nature's glory does not stop there. Between the valley and Tenaya Lake some 10 miles upstream is a magnificent canyon with enormous rock faces and spectacular scenery.

Tenaya Lake, Creek and Canyon take their name from the shrewd old chief of a band of native Americans who called themselves the Ahwahneechees and were living in Yosemite Valley (which they called Ahwahnee) when the white men first arrived. Numbering about 200 the Ahwahneechees had already been ravaged by the white man's diseases that had preceded him. Sometimes the younger men would travel west toward the lowlands to poach from the white settlements and ranches there. But generally they lived peaceably on a diet of acorns, roots and game, surrounded by some of the most spectacular scenery in the world.

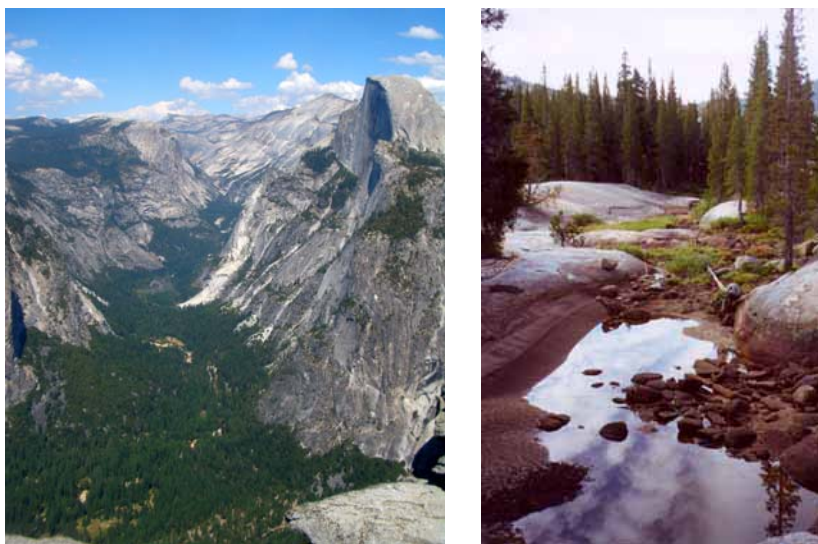
In the early 1850s, the white settlers decided to remove the Ahwahneechees to a reservation near Fresno and sent a battalion of men to effect this deportation. Needless to say the Ahwahneechees did not want to leave their valley. There followed a number of evasions, negotiations and escapes. Months passed and when a second battalion under a Captain John Boling entered the valley to resume the deportation effort, the confrontation turned violent. Several young Indians were captured and one was shot while trying to escape. This young man was one of Chief Tenaya's favorite sons. When the old chief was informed, he was enraged and during a confrontation with Captain Boling expressed that anger in laying a curse on the white man:

"Kill me, sir captain! Yes kill me, as you killed my son; as you would kill my people if they were to come to you! You would kill all my race if you had the power. You have made me sorrowful, my life dark; you killed the child of my heart, why not kill the father? You may kill me sir captain, but you shall not live in peace, I will follow in your footsteps, I will not leave my home but be with the spirits among the rocks, the waterfalls, in the rivers and in the wind; wheresoever you go I will be with you. You will not see me, but you will fear the spirit of the old chief, and grow cold."

To this day, Yosemite Valley and Tenaya Canyon are haunted by the spirits of the murdered boy and Indians and white men alike tell tales of mysterious accidents and unaccountable deaths which they attribute to the curse of Chief Tenaya.

In summary, Tenaya Canyon got off to a bad start in recorded history. And the curse seemed confirmed during John Muir's exploration of the canyon, described in chapter 2 of his "Steep Trails" (1918). Setting out to investigate Tenaya Canyon from the valley bottom, this intrepid mountain goat of a man fell for "the first time since I touched foot to Sierra rocks". He describes how he was knocked unconscious and only saved from a life-threatening continuation of the fall by being wedged among short, stiff bushes. Recovering from his fall, Muir spent the next few days ascending the Inner Gorge, eventually "...escap(ing) from the gorge about noon, after accomplishing some of the most delicate feats of mountaineering I ever attempted...". The canyon's reputation continues today for every year exuberant visitors anxious to see what lies beyond the end of the trail, venture into Tenaya Canyon unprepared and have to be rescued by the Park Service. The standard guide map is marked in red "Hiking in Tenaya Canyon is dangerous and strongly discouraged". Park rangers refer to it as the "Bermuda Triangle of Yosemite". But to the experienced canyoneer with good guidance (and there are several places where careful navigation is essential), Tenaya Canyon provides a rugged and spectacular canyoneering adventure.

In 1999, while standing on the top of Half Dome I had strained to see what lay within Tenaya Canyon and vainly searched the distance for some glimpse of the Pywiack Cascades. That curiosity persisted through the winter that followed so that, early in the new millenium, I had resolved to descend Tenaya



Left: Tenaya Canyon from Glacier Point. Right: Tenaya Creek just after start.

Canyon all the way from Tenaya Lake to so-called civilization in Yosemite Valley. As I planned the expedition, I found webpages that described several of the descents made by Bob Courtemanche and his friends and decided to contact Bob to seek his advice on the specific technical equipment we would need. That led to the suggestion that we might get together, Bob for his 21st descent of Tenaya Canyon and my group for its first. So it was that after depositing one vehicle in the backpackers parking lot near Curry Village in the Valley, we drove up and over the Tioga Pass in the other car to meet up with Bob at the Mobil gas station near the intersection of routes 395 and 120 in Lee Vining. Incidentally, I recommend a visit to this establishment which is much more than your conventional gas station. It is also a useful convenience store, restaurant and local night-life spot. A useful guitar-playing singer was entertaining the outdoor crowd on the evenings we spent there. Even more unusual was the high-flying trapeze equipment that several of the regulars took turns on during our visit.

The next morning we drove back over the Tioga Pass and down to Tenaya Lake. Five of us set out that morning from the Sunrise Trailhead (elevation 8160ft) at the south end of the lake: Clancy Rowley, Don Caldwell and myself accompanied by Bob Courtemanche and his friend Steve Cochrane. We followed the Sunrise Trail as it immediately crossed the Tenaya Creek streambed though this had almost no water in it this late in summer. We could have started straight down the creek bed, but it was somewhat more convenient to continue on the Sunrise Trail for a short distance to where it began to climb away from the creek. There, 15min and 0.5 miles from the start, we left the trail to follow the streambed, gradually crossing to the right or left side where the going was easier over flat rock slabs interspersed with low forest. Above on the right was a steep

rocky ridge that separated us from the Tioga Road (this ridge also prevents you from viewing the creek from the Tioga Road). About 40min from the trailhead, the canyon began to deepen and we followed the streambed boulders past an old Park Service sign on the right which read:

WARNING
*This is not a trail
Travel beyond this
point is dangerous
without climbing
equipment. Return
to Tioga Road.*

A short distance beyond the sign, we arrived at a crest (elevation 8050ft) where the stream (if it is running) drops into a huge rock-lined bowl, joins another creek coming from the left and then veers to the right. This bowl is an awesome, majestic sight with nothing for hundreds of yards but the glacier-polished rock edged with sparsely forested heights all around. This is where the big-time glacier began. Odd rocks not yet swept to the bottom, dot this other-worldly landscape and here and there the combined action of rock and stream have carved holes in the otherwise smooth terrain. To negotiate the rock bowl we contoured to the left, traversing along more gently sloping rock into the bottom of the huge expanse. Once we reached the stream, we then proceeded down the rock-lined valley toward the west. Soon, the vista before us became even more spectacular as Half Dome came into view far to the west. The accumulation of vegetation in the bottom of the bowl has created a flat forested valley meadow that we bypassed on the right since the going was easier on the rock slabs at the edge of the forest. Here, Bob's experience first became valuable for he identified a single, prominent boulder (the "Lone Boulder") ahead of us, up on the profile of a bare rock shoulder on the left side. Half Dome appeared in the distance behind this boulder. It was valuable to fix the location of the Lone Boulder in our minds for, as the forest petered out, it disappeared from view. Here the landscape is all rock and we followed the streambed for a short way until, at an elevation of 7500ft, we came to a lovely little pool where we filtered water for the exertions ahead. We arrived at this point about 3.3 miles from the trailhead after 1hr 45min of hiking.

For some time before this, we began to be aware of a huge abyss ahead between us and the massive and sheer face of Mount Watkins beyond that abyss to the north. Tenaya Creek proceeds northwest from here over polished rock and drops about 1000ft via the Pywiack Cascades down into the deep valley ahead. We had read of others who had rappelled down beside the creek, a long time-consuming and exhausting endeavor. Guided by Bob we took a much easier route, perhaps the only route that could be considered straightforward. From the pool where we halted, we left the streambed and climbed the rock slab to the left (or west). Soon the Lone Boulder came into view again and we headed directly for it. When we gained the ridge on which the boulder sits, we



Left: First rock bowl. Right: Yosemite valley from Lone Boulder.



Left: Rock slab descent. Right: Rappel into Inner Gorge.

were treated to a spectacular vista to the north and west. Tenaya Creek now lay a thousand feet below us at the bottom of a deep gorge with polished rock sides. To the west lay the magnificent Yosemite Valley and its gigantic monuments, Half Dome, Glacier Point and the rest. We paused to enjoy this fantastic place and to gather our strength and resolve for what seemed a dramatic descent ahead.

This was the point in the hike where Bob's guidance was most valuable for it was hard from above to see the obstacles on the slope below, let alone assess the difficulties. To stray too far to either side of the correct route would be to risk finding yourself on a steep polished rock slope with many hundreds of feet of exposure. The descent down into the valley lay to the left (northwest) of the slope directly below the Lone Boulder. From that waypoint, we had taken note of the talus slope that drops down directly ahead. We identified a substantial band of bushes running up and down the slope to the left or west of the talus

slope. Then we descended the talus slope veering to the left to find our way through this band of bushes, with some bushwhacking. On the far side of the band of bushes is another rockslide or talus slope and we began descending this veering toward its left side. Soon we began to discern that we were on the apex of a slight ridge-like prominence in the otherwise flat rock-slab slope. Unlike the slab to either side the rock slope of this prominence is interrupted by patches of bushes all the way to the valley bottom. A single large pine tree near the bottom provided a useful waypoint for the descent route proceeds directly down to this tree. The steepness of the rock slab made for a nervous descent but by maintaining a route with a group of bushes directly below, the discomfort was eased. In several places, I was more comfortable sliding on my rear end while gripping convenient cracks in the rock face with my hands.

Eventually, we reached the large pine tree and followed the now gently sloping rock slab down toward the left. This brought us to another nice pool in Tenaya Creek at the bottom of an attractive sloping cascade. Here by the pool at the end of the descent, we chose to rest and have lunch. We reached this point (elevation about 6250ft) after about 2.5hr of hiking.

A short distance along the creekbed from the pool, we entered Lost Valley, a bucolic stretch where the stream meanders through a beautiful High Sierra forest. The Lost Valley is only about 0.5 miles long and so, before long, the going became more rugged with many streambed boulders to negotiate. Then, quite abruptly, we arrived at the top of the Inner Gorge where the stream has cut a dramatic, vertically walled canyon into the valley floor. On the right side of the gorge are several levels of flat ledges that extend horizontally about 60yds along that side of the gorge. Our route led along the large, lower ledge. But before taking that path, we climbed a few feet up to the higher ledge and followed it about 50yds along to a place where S.L.Foster carved his initials in the wall. Foster was one of Bob's predecessors in that he made annual trips down the canyon from 1909 to 1937 and this spot is now known as the "Initial Ledge". Someone has also installed a register consisting of a plastic case in an alcove next to the initials and we added our names to it. Then we returned to the head of the gorge, climbed to the lower ledge and followed it along to the rappel point beside a small pine tree growing out of the ledge lip. The anchor is about knee high and consists of two bolts with webbing and a rappel ring; it is relatively easily found. From there it is a straightforward 40ft rappel into the bottom of the Inner Gorge and we reached this point (elevation roughly 6000ft) about 5hrs and 5m from the trailhead.

The transit through the bottom of the Inner Gorge was tough going. After one straightforward downclimb, we arrived at a 25ft drop to a large deep pool spanning the canyon. Bob, Steve and Don downclimbed the dry crack on the left though with some exposure. At the bottom they swam the 15yds to the downstream shore. Clancy and I chose to rappel on the left side by the waterfall and waded to the shore. Below the pool the canyon drops steeply through a very rugged section. Here there is much downclimbing and we made our way along on the right, in one place crossing the top of a large rock slab using the bushes for security. Just beyond this rock slab we descended a gully to the streamside



Left: The swim in Inner Gorge. Right: The second rappel.

only to be greeted by another steep cascade below us. The route from here was not obvious. On our right was a slot between two rock masses which seemed like a dead end. However, by proceeding into this slot we found a small gap between the rock slabs that we could squeeze through to access the scree slope downstream of the cascade. From here we contoured along the right side and some distance downstream found ourselves on a large flat rock shelf with the stream in a gorge on our left. Near the end on the edge where the shelf peters out, we found a rappel anchor consisting of two bolts with webbing and rappel ring. Using this it was a straightforward 70ft rappel down into the bottom of the gorge. There is a non-downclimbable 70ft waterfall just upstream from this rappel so it is not useful to try to descend into the gorge before this anchor location. We reached this point (elevation roughly 5500ft) about 7hr from the start.

Downstream of the second rappel the gorge proceeds through a narrow winding slot. The first obstacle was a waterfall that we downclimbed in a slot on the right. This was followed by a sloping 40ft cascade that we downclimbed but should have rappelled using the bolt anchor installed in the rockface to the right of the stream. This cascade is notable for the large, deep hole in the rockface about two thirds of the way down. There is a pool at the bottom of this rappel that can be bypassed on the right. More boulder downclimbing followed until, quite suddenly the slot ended and we emerged into a broad valley bottom at an elevation of 5250ft. This marked the end of the Inner Gorge and it was here that John Muir spent the night after his fall. There is no more technical climbing but we still had a lot of rough ground to cover before reaching developed trails. We reached this point about 7hr 45min from the start.

Downstream of the gorge, the boulder-strewn streambed gradually became flatter and the going became easier. We passed under the dramatic Watkins Pinnacles high above us on the right and the Quarter Domes opposite them on the left. Eventually we picked up a use trail on the wooded right slope and followed

that for several miles until, eventually, we came to developed trail. At that point a footbridge used to carry the Mirror Lake Loop Trail across the stream but the bridge was swept away by a flood a few years ago. The maintained trail tracked along the right or north side of the canyon bottom, passed under Half Dome and along the side of the now-vanished Mirror Lake. At the Mirror Lake Visitor Center we came to asphalt road and followed the signs through the end of the Yosemite Valley development toward Curry Village. Passing over Clarks Bridge and around the west end of the North Pines campground we reached the Backpackers parking lot and our vehicle (elevation about 4000ft). It took us about 10hrs to complete the 10 mile hike.

Chapter 27

A DIFFERENT PILGRIMAGE

*“If a man does not keep pace with his companions,
perhaps it is because he hears a different drummer.
Let him step to the music which he hears,
however measured or far away”.*

From “Conclusion” by Henry David Thoreau.

John Brown (1800-1859) was one of the most remarkable men to tread the pages of the history of the United States. An ardent and fanatical abolitionist, Brown, for most of his life, was a poor farmer who failed miserably in many small farming business ventures. Married twice he had twenty children and moved from place to place to avoid his many debts. His children were equally committed to the banishment of slavery and with their father several of his sons came to the attention of the nation in the 1850s when they figured prominently in the bloody skirmishes between free and slave state supporters in Kansas. It was during this time that Brown began to form his own plan to free the slaves of the southern states. He surmised that if he could form a small army and begin an incursion into the south then all the slaves would flock to his flag generating a massive army that would sweep all before it. His Kansas notoriety allowed him an introduction to many determined abolitionists in New England and during a visit there he was able to acquire some financial support with which to put his plan into action. Encouraged, he secretly began to recruit his army of liberation but with very modest success. In the end it consisted of but 21 men including three of his sons, Oliver, Watson and Owen.

Brown fixed upon the small town of Harper’s Ferry, Virginia as the starting point for his southern invasion. Harper’s Ferry was a railroad town at the junction of two substantial rivers. More importantly it contained a very lightly

guarded arsenal whose capture would allow him to arm the anticipated host. Surrounded by cliffs and mountains it was also relatively isolated. On July 3, 1859, John Brown arrived in the vicinity of Harper's Ferry with his 34-year-old son Owen, his 20-year-old son Oliver and the Kansas veteran Jeremiah G. Anderson. They rented a small farm in Sandy Hook, a village on the Maryland side of the Potomac river about a mile downstream from Harper's Ferry. There they made secret preparations for their military operation. During the next few weeks the rest of the small but dedicated army began to assemble.

On the morning of Sunday, October 16, 1859, John Brown and his army of liberation, took up their arms and marched on Harper's Ferry. Son Owen Brown was left at the farm to tend the horses. Perhaps John recognized a lack of total commitment in Owen, a sensible doubt about this madcap scheme. In doing so he spared his son's life. For the invasion of Harper's Ferry was doomed from the start. Those of the army who were not killed during the raid, were later tried and hung for treason. Among the latter was John Brown himself. His trial became a national sensation and the widespread recognition that Brown was going to die for his commitment to this lofty goal turned him into a hero, remembered for ever in song and legend. Crazy as his exploits were, they galvanized a nation in a way that made the end of slavery inevitable. Even Henry David Thoreau modified his views on violence and in the end wrote: "*He is not Old Brown any longer; he is an angel of light*". And yet the debate must linger.

But this story is not about John Brown whose life and legend have filled the pages of countless volumes. Rather this story is about a very different personality, his son Owen, one of the few survivors of the Harper's Ferry raid. Owen was born in Hudson, Ohio, on Nov.4, 1824, the third son of John Brown and his first wife, Dianthe Lusk. Surrounded by an obsessed father and equally headstrong brothers Owen, a gentler soul, grew up learning to compromise and to conciliate. In his marvelous novel, "Cloudsplitter", Russell Banks paints a sympathetic picture of Owen's introspective nature. His loyalty to father and family placed him in impossible situations and dilemmas that his natural inclinations would have avoided. And yet he was convinced of the evil of slavery. Thus Owen personifies the dilemma of the many abolitionists who were both pacifists and abolitionists by conviction and yet could not visualize an end to slavery that avoided violence.

Throughout his life, Owen traveled in his father's shadow, trying where he could to ameliorate the worst excesses of his father's zeal. He was present at the notorious and indefensible incident at Pottawatomie, Kansas, where the Browns murdered five pro-slavery raiders, one of whom was summarily executed by John Brown himself. Yet none of the accounts of that incident indicate that Owen was an active participant.

As he was preparing his plan for the Harper's Ferry raid, John Brown must have recognized that his third son, while a valuable assistant in other ways, was not by nature comfortable with the use of violence. So, on that October morning when the rest of the army descended from the Maryland Heights and crossed the railroad bridge into Harper's Ferry, Owen was left behind at their farmhouse base to tend to the horses. Later that day, after gunfire was heard,

another man who had remained behind with Owen was able to observe the situation from the clifftop above the town. When he described how the army was now surrounded, trapped and doomed to death or capture, Owen was left with only one option, namely to flee.

And so began Owen's epic flight from Harper's Ferry, recorded in an article in the March 1874 edition of the *Atlantic Monthly*. Five living and uncaptured members of John Brown's army (one other, a black man who ended up in Liberia, escaped separately), Owen, Barclay Coppoc, Frank Merriam, Charles Tidd and John Cook, traveled for weeks, hiding by day and moving through the woods at night in their effort to evade their pursuers. With a price on their heads and their story filling the newspapers, they suffered starvation and degradation, and evaded capture only by the narrowest of margins on numerous occasions. Only the resourcefulness and strength of Owen Brown kept them together and kept them going. They traveled on for many weeks, raiding barns, chicken coops and orchards as they made their way north through Pennsylvania. At one point John Cook volunteered to expose himself in an effort to buy food. He was summarily captured and then hanged. Later, Merriam became so exhausted and ill that he could not continue. The others had no alternative but to clean him up and, despite the fear that he would be taken, put him on a train toward his home. Miraculously he evaded capture but died a few years later in New York. The remaining three continued their flight north. Eventually, when far enough away in time and distance that the chances of capture had begun to ebb, they dispersed. Coppoc reached home, joined the Union army and was killed. Tidd died of fever during the Civil War. And thus Owen became the last survivor of the Harper's Ferry drama. He found his way to the home of his eldest brother, John Brown Jr., on an island in Lake Erie called Put-in Bay. There he lived in hiding for years.

In 1874, long after the end of the Civil War, when the chances of recrimination had withered, the reporter Ralph Keeler found Owen Brown on Put-in Bay Island and told his story in the *Atlantic Monthly*. By this time Owen had become a footnote in history and no one seemed inclined to prosecute him. Indeed, he became something of a folk hero, especially to the veterans of the Union Army who had fought so long and hard to eliminate slavery. He never married, and led a somewhat itinerant life involving visits to the remaining members of the Brown family, particularly his brother Jason Brown, his sister, Ruth, and her husband, Henry Thompson. In 1884, Jason and the Thompsons left Ohio and moved west to settle in Pasadena, California. The following year, Owen joined them. He and Jason found a sloping bench in the foothills of the rugged San Gabriel Mountains just north of that growing city. It was a place called Las Casitas, on the east side of Millard Canyon and there they homesteaded 80 acres where they built a cabin and cleared the land for a vegetable plot. Two years later, in 1886, their Las Casitas land was bought out and Jason and Owen moved to another homestead in El Prieto Canyon, just over the ridge from Millard. There, in a lovely wooded glen with a sparkling stream, they built a small mountain home under the oak trees. For the next three years, they lived simply and contentedly in El Prieto Canyon. They enjoyed gardening, reading, hiking

and exploring in the mountains. Visitors often sought them out, especially curious to meet the last survivor of Harper's Ferry. And they were not disappointed for Owen and Jason enjoyed recounting stories of the family's adventures.

But at least one ambition remained. Surrounded by the precipitous San Gabriel Mountains that they had come to love, the Brown boys decided to find an unnamed peak to name after their father. After several failed efforts, they persuaded the powers that be to name the 4485ft peak immediately north of their home in their father's honor. Thus it became, officially, Brown Mountain and appears as such on the topographical maps though few of those who live in its shadow seem to know that it is named after the liberator.

Owen Brown died of pneumonia on Jan.9, 1889, at the age of 64. It is said that his last words were: *"It is better to be in a place and suffer wrong than to do wrong."* And his efforts in the abolitionist cause became recognized in death as they never had been while he was living. The City of Pasadena gave him a grand funeral attended by all sorts of dignitaries and thousands of people. The orations were long and numerous. Then Owen was buried on a small but prominent knoll on the ridge between Millard and El Prieto Canyons, overlooking both the Las Casitas and El Prieto homesteads. The knoll is called Little Roundtop. It is a quiet, even lonely spot on the edge of the wilderness. The gravestone is a simple round boulder. Chiselled into the stone are the words

Owen Brown

son of

John Brown

The Liberator

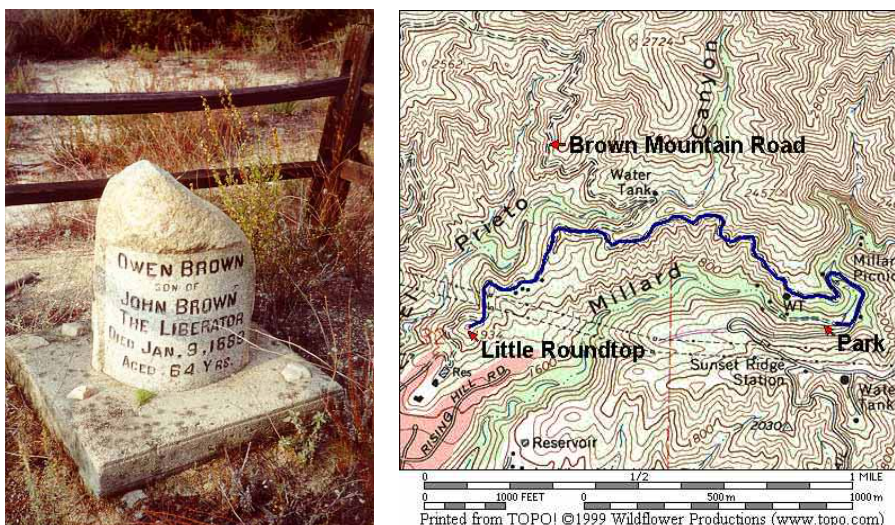
Died Jan.9, 1889

aged 64 years

To this day the grave in the wilderness is lovingly tended, in recognition of the important place John Brown occupies in the conscience of the nation. I would like to think that it also remembers Owen, a man torn between two great and noble objectives, the principles of nonviolence and equality of man. It has become a place of pilgrimage for those who still wish to honor their memory and their cause.

Like the other chapters in this collection this story is about a walk in the wilderness. Unlike the others, the physical effort involved with the hike is minimal. It is a short and easy walk, little more than a mile in each direction. But in other ways it is a long and troubling road. For the destination is the grave of Owen Brown, perched on its wilderness summit.

To reach the start of this walk, drive north up Lake Avenue from Pasadena through neighboring Altadena. Turn left at the top of Lake onto Loma Alta and drive several blocks west. Turn right onto the small road labeled Chaney Trail. Follow that up and over Sunset Ridge, dropping down into the Millard Canyon where the road ends in a parking lot close by Millard Canyon Campground. There the hike begins; follow the fire road through the campground, veering left



Left: The grave of Owen Brown. Right: The route to Little Roundtop.

after crossing Millard Creek. From there the dirt road turns west and slowly climbs the ridge that separates Millard Canyon from El Prieto Canyon to the northwest. After a mile and just after passing a beehive corral, you will come to a fork. The right fork leads to the Brown Mountain Road that terminates high on the shoulder of Brown Mountain above the Arroyo Seco. But the present route lies straight on along the top of the ridge. After several hundred yards you pass a metal gate and two small houses. Just beyond the second house, the narrow asphalt road turns left. Go straight here along the dirt road. After about 20yds take the trail that contours right around a knoll topped by three large power pylons. The next knoll without any pylons is Little Roundtop. A use-trail climbs a short way to the summit.

If you are very ambitious you may decided to carry the pilgrimage all the way to the top of Brown Mountain. That is a very different proposition. While there is no maintained trail to the summit, 4485ft Brown Mountain can be climbed from either the east or the west. The Brown Mountain Road climbs to a shoulder on the west side of the mountain and, from there, a steep use-trail up the ridge takes you to the summit. A similar use-trail cum firebreak also climbs to the top from the east starting at the trail junction on Tom Sloan Saddle, a junction that can be reached by hiking up the Millard Canyon trail. Both approaches to the summit are tough all-day hikes.

On Martin Luther King Day in January 2001, I decided on a different pilgrimage, drove to Millard Campground and made my way along the quiet dirt road to the top of Little Roundtop. I thought of all that King stood for and all he has come to symbolize. Of the nobility of his convictions and the power of his legacy. That the words "*I have a dream ...* " will last as long as this country exists and will rightly energize all the generations yet to come.

But I also thought of Owen Brown, a simple man, caught in the most violent vortex in the history of this nation, and striving to find a path between violence and virtue. It is a struggle we will always face and one that Owen's life, too, has something to teach us. I placed a flower on the round boulder and watched the sun sink below the horizon.

Chapter 28

SALOME INHERITANCE

*“What seas what shores what grey rocks and what islands
What water lapping the bow
And scent of pine and the woodthrush singing through the fog
What images return
Oh my daughter.”*

From “Marina” by T.S. Eliot.

Out in the Arizona wildlands, beyond the end of the Apache Trail, on the far northeastern side of Roosevelt Lake, is the remote Salome Wilderness. It is rugged mountainous country, a land of rock and cactus where the summer temperatures soar into triple digits and all man’s ingenuity is needed just to survive. Water is king here and the winter storms create ribbons of life that manage to survive through the baking heat of the summer sun. Over one large area in the Sierra Ancha mountains, the rain funnels down into a stream known as Salome Creek. On its way southwest toward Roosevelt Lake, the creek has had to cut its way round the base of the great rock monolith called Dutchwomen Butte. In doing so, it has carved deeply into the pink and white sandstone to create a fantastic, mile-long ravine known as the Salome Jug. This narrow, vertical-walled jewel of a canyon makes for one of the most marvelous canyoneering experiences anywhere in the world. The descent requires almost continuous wading and swimming through ravine-filling pools, interrupted by numerous waterfalls and cascades. It is not a place for the faint-of-heart.

I had read about the Salome Jug in a number of hiking guides and had been intrigued by the lyrical descriptions of this special place. In at least one instance, the author of the guide was reluctant to describe the location of the Jug because of fears it would be over-used. To me this simply added to the fascination. Then, one winter, I was visiting my younger daughter, Kathy, and her family in Scottsdale, Arizona. I had been reading Tyler Williams excellent guidebook entitled “Canyoneering Arizona” and left it on the living room table

when I opted for an early night. Later that evening, unbeknownst to me, Kathy picked up the book and started to flip through it. Coincidentally her attention was drawn to the description of the canyoneering descent of the Salome Jug and, the following day she asked me rather tentatively whether it might be possible for her to explore that place.

That moment was, for me, one of great exhilaration. In the preceding decade I had many times idly hoped that I might be able to enjoy one of my more spectacular adventures in the company of one of my three beloved children. Though both athletic and adventurous, the two older children, my daughters Dana and Kathy, had their own families, their own successful careers and scarcely a moment to spare. My son Patrick might well have grown to love the wilderness and did, indeed, accompany me on a tearfully-remembered climb of Mount San Antonio. But he had been tragically killed in an automobile accident at the age of 23 leaving me to forever think of what might have been.

These emotions coursed through me as Kathy and I made plans to explore the Salome Jug during the coming May when river conditions would be optimal. In the winter, the descent of the canyon is impossible because of the high water flow rate. On the other hand the river tends to dry up as the summer progresses and the pools accumulate a surface scum of green slime. Thus the best time is May or June when the flow is moderate, the water is clear and not too cold, and the air is warm enough to allow one to dry out and warm up in the sun. A few weeks before the weekend we had settled on, I bought Kathy a proper pair of trail running shoes as well as wicking clothing. Though she had never done anything like this, I knew that she was nimble and a strong swimmer. Though she had never rappelled, she seemed confident that she could learn it on the spot.

From the intersection of State Highways 87 and 188 about 60 miles northeast of Phoenix, Arizona, we drove southeast on SR 188 for 19.4 miles through the hamlet of Punkin Center to mile post 255. We turned left onto the dirt-surfaced A+ Cross Road and followed it as it dropped down into a wide river valley. After a mile, the road crossed the stream at a broad ford where the water was only about six inches deep and, after a short stretch of asphalt, we turned left to follow a dirt road again signposted A+ Cross Road. This wound in and out of various drainages as it climbed episodically along the southern slopes of Victoria Peak. Soon the imposing mass of Dutchwoman Butte came into view ahead of us to the east. Coming to the last ridge between us and the Butte, we easily located the A+ Cross trailhead and parking area on the left side of the road some 10.1 miles from SR188.

From the trailhead (elevation 3200ft), the trail headed east, winding in and out of three large gullies and bringing us closer to the shadow of Dutchwomen Butte. Though sparsely vegetated, the land is populated with cacti including giant saguaro, prickly pear, ocotillo and many smaller varieties. Now, in May, many of them were in bloom and added to the delight of our morning start. After the fourth headland about 1.8 miles from the trailhead, the trail started a switchbacking descent down a shallow draw at the bottom of which we could discern the sharp edges of the ravine known as the Salome Jug. As we reached the flatter ground above the rim of the ravine, the old jeep trail turned north

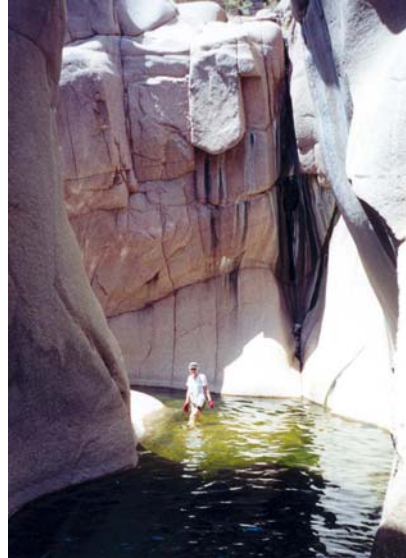
and began traveling upstream, paralleling the gorge. Soon it passed through a barbed wire fence and gate and, just beyond, we came to a flat rock shelf with marvelous views of the creek. Looking upstream we could see a series of waterfalls and pools as the stream began its drop into the slot canyon. But, we could also look straight down into a ravine-filling pool directly beneath us, the start of the Jug. We reached this point (elevation 2840ft) about 2.4 miles and just under 1hr after starting out.

The next task was to descend to the river at this upper end of the Jug. This we managed by going a short distance upstream and then climbing down through the broken cliff to a large rock overlooking one of a series of deep pools separated by waterfalls. It was clear that we had to descend into this pool and immediately begin swimming. This was the first moment of truth, the first test of her agility and resolve for entering white water like this is not for the faint hearted. But she nimbly climbed down the steep crack, descended into the water and began swimming confidently. And the first part of my trepidation evaporated. The initial set of cascades were awkward and slippery but we soon became accustomed to swimming, wading and downclimbing.

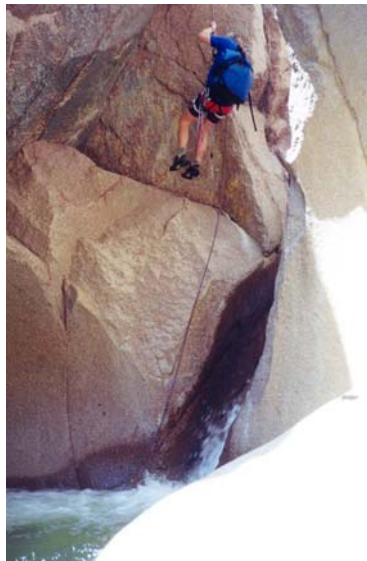
As we progressed downstream, the ravine walls grew in height and the gorge narrowed to about 20ft. The polished granite walls that rose vertically on all sides had been sculpted into spectacular shapes by eons of rushing water. It truly was a wondrous place. Some distance into the gorge, we encountered an awkward 10ft drop where the stream splits on two sides of a huge, canyon-blocking boulder. I rigged a small rappel here rather than attempting the slippery downclimb. Kathy managed to descend the 10ft without too much difficulty. There followed a succession of pools and swims before we stopped for lunch on a warm boulder beside the only tree we encountered in the gorge. Here the sun penetrated and we were able to rest and warm ourselves.

Nearing the end of the Jug, where the walls of the gorge reach their maximum height, we came to the major obstacle that I was anticipating with considerable trepidation. Here the stream drops alarmingly through a narrow slot to a large pool that stretches away down the gorge. Because there are few features of recognizable dimension, it is hard to judge the magnitude of this drop. Though only about 30ft, it looked much larger and quite intimidating when viewed from above. I could tell that Kathy saw this as an obstacle of significantly greater magnitude than what we had conquered earlier. But her face showed no fear. I wondered how on earth I was going to help her to descend such a difficult obstacle when she had never rappelled before. Here she would also have to make an awkward swimming disconnect. There would be no-one at the bottom to help her since I would have to remain above her so that I could reach her should she have trouble during the rappel descent. I knew I had over-reached myself. But there was no going back now.

So I took a deep breath and studied the situation. A ledge about 6ft up the rock face on the right clearly allowed one to traverse over beyond the falls to a point where there were anchor bolts in the rock high above the pool in the cavern below. But the traverse of the ledge looked awkward and nervy since the rock face was somewhat sloped and even seemed a little slippery. Fortunately,



Left: Salome Creek above the Jug. Right: Kathy in the upper Jug.



Left: Bottom of the rappel. Right: Big pool beyond the rappel.

another bolt had been installed in the rock at the start of the ledge and a length of webbing had been stretched across between this bolt and the rappel anchor to provide the security of a handrail for the traverse over to the rappel anchor. Using this I made my way over to the anchor point to size up the options. Once there I recognized that the drop was only about 30ft and that the deep pool directly underneath would provide a safe landing if anything went wrong during the rappel. The alternative would have been to jump into the pool. But being uncertain of the depth I felt this would not be a sensible option. Therefore I set up a double-strand rappel and braced myself to help Kathy tackle the descent.

First she attached a carabiner to the handrail and slowly and carefully made her way along the ledge to the rappel anchor. I was relieved to see that she did this carefully and without any panic. So far so good. Now we were both standing awkwardly on this tiny platform at the top of the rappel. With very little room to maneuver, I hooked her in to the rope and gave her repeated instructions about how to rappel down and about how to disconnect once she was in the water. I tried at the same time to work out what I would have to do in the event of several possible misadventures. Already what she had done was remarkable; now came the crux.

So she started down. Fortunately the rappel anchor was just above us and therefore the entry was straightforward. She soon got the feel for descent. I hung out over the edge watching her intently for any sign of trouble as she lowered herself 10ft and then 20ft. At that point the rock face was undercut and she found herself hanging in a free rappel, her feet no longer in contact with the rock. That would have been enough to freak out any beginner. But she kept going, down into the churn at the base of the falls some 30ft below me. Now came the biggest challenge, to disconnect herself in this turbulent white water and swim free from the rope. I was ready to jump at the first sign of trouble. At first, she did have trouble swinging crazily on the rope, buffeted by the turbulent water. But then suddenly she was free and swimming briskly over to a broad rock shelf in a recess on the other side of the ravine. She clambered out of the water, smiled up at me and I grinned and clapped and whooped. It was a truly magnificent performance, far beyond anything I could ever have done as a rookie. In that moment, my pride in my brave daughter overwhelmed me and the relief brought tears to my eyes.

But now it was my turn. Even I struggled with the swimming disconnect in the churning water before joining Kathy on the sunlit shelf below the falls. As people often do in such circumstances, we chatted excitedly about the obstacle we had overcome in this special place while the sun warmed us.

After resting on the shelf in the recess, we surveyed the next hurdle. Ahead of us lay a deep pool that wound back and forth between vertical walls with no end in sight. Another act of courage would be needed to set off swimming through this pool with no visible destination and no staging points on either side; just smooth, vertical sandstone walls. But Kathy was ready and set off with those long, powerful swimming strokes that I remembered from her days as a competitive swimmer. I followed her as best I could and, about 50yds downstream and just around the corner, we came to a gravel beach and recovered

solid ground. But that was not the end. Just a short distance down the canyon, there was another long pool to swim, and then another. And another, but here the cliffs on both sides opened up, the pool ended and we suddenly realized that we had emerged from the Jug into a broad gentle valley. It was nearly four hours since our morning start and our magnificent adventure was coming to a close.

Emerging abruptly from the Jug, we left the stream and followed a use-trail up the steep slope in a shallow recess on the right. This trail transitioned onto a bluff and brought us back to the old jeep trail we had used on the way down. Thus we began our trudge back up the hill in the hot afternoon sun. All Kathy's reserves of energy and adrenalin had been exhausted by now and so she had a hard time covering the 2.2 miles back to the trailhead. I felt for her, remembering some of the struggles I had experienced long ago when I started hiking. Now, I simply zoned out and free-wheeled, allowing the miles to slip effortlessly by.

Most of all I remained incredibly impressed by my beautiful daughter's bravery and strength. How could I ever ask for more in any individual than she showed me that day in the Salome Jug? Yet I hope I did not demand any of it. I hope that she did it for herself for the same reasons that I so often seek to find the limits of my own frailty. I am immensely proud to be Kathy's father.

Chapter 29

THE GRAND TETON

“Every mountain adventure is emotionally complete. The spirit goes on a journey just as does the body, and this journey has a beginning and an end, and is concerned with all that happens between these extremities.”

From “The Mountaineer as Artist” (1914) by George Leigh Mallory.

In the 1920’s George Leigh Mallory was part of the British team that first tried to climb Everest and his death during the third attempt in 1924 created one of the most enduring legends of mountaineering. In 1999, a group of searchers found Mallory’s body and revived the debate over whether or not Mallory and/or his young companion, Sandy Irvine, had made it to the summit. Let me hasten to say that this story is not a parallel to those dramatic events. Rather, I have always been intrigued by Mallory’s insightful comment on the journey of the spirit that every mountain adventure creates. I am not sure that I understand why this observation is so true, but it is. One could argue that a mountain ascent is just another form of recreational exercise - like a game of tennis. But I cannot imagine that even the most imaginative tennis player comes anywhere close to the quasi-religious experience that Mallory identified. Perhaps it derives from a combination of a single lofty goal, spectacular scenery and hallucinations brought on by exhaustion. It is easier to describe by example.

The Teton mountains are spectacular jewels of rock and ice that soar into the heavens above the flat plain of Jackson Hole, Wyoming, in northwestern United States. I remember driving westwards through Wyoming in 1970 and, upon cresting the Togwotee Pass, seeing the magnificent Teton range for the first time. Piercing the western horizon, they were the most magnificent mountains I had ever seen, rugged pinnacles rising precipitously into the sky. Native Indians called them the “Hoary Headed Fathers”, but when the French trappers of the Hudson Bay Company came this way they called them “Les Trois Teton” or the “Three Tits”, a name that stuck and by which the South, Middle and Grand

Teton are now known. In 1970, preoccupied with my family vacation, I little thought that someday I would return and attempt to climb the highest of those pinnacles, the 13770ft Grand Teton. This story is about a time in the year 2001 when I did return knowing full well that I would experience my own spiritual saga on the awesome Grand Teton.

The beauty of the Teton mountain range and the area surrounding it was recognized early in the modern era when the Grand Teton National Park was established in 1929. The mountains, glaciers, lakes and abundant wildlife made it a national treasure and, today, a particularly popular destination for hikers and climbers. But the mountain was climbed long before it was claimed by government bureaucrats. The Grand was first conquered by William Owen, Frank Spalding, Frank Peterson and John Shive who reached the summit on Aug. 11, 1898, using a route that is known today as the Owen-Spalding route. Though most of this route is a matter of finding your way up steep talus slopes, the last 600ft ascent of the summit block requires technical rock climbing know-how and technique, as well as the ability to handle exposure that can be several thousands of feet in places. The climbing skills required depend very much on the weather and the time of year. When the cracks, chimneys and crevices of the summit block are lined with ice or filled with snow they present a formidable climbing challenge. But in the late summer when the route is usually (but not always) free of ice most of the climbing challenges (only a few moves above 5.4) would be modest if they were at the level of the valley below. On the other hand the weather, route finding and massive exposure add considerably to the challenge. But the awards are spectacular views of these magnificent mountains from a truly remarkable vantage point.

Somehow I knew from the outset that the days we had planned in the Tetons, though spectacular and exhilarating, would also be tinged with sadness for they marked beginnings and endings. Some of these I foresaw, others I did not. The canvas was the mountain itself, magnificent and awesome, the greatest challenge I had ever faced. Throughout those days Mallory's words kept me wondering about the beginnings and endings.

Perhaps the first beginning had been many years before in 1992 when Doug Hart and I had set out on a great mountain adventure, the first of our several efforts to climb El Picacho del Diablo (see Mountain of the Devil). Doug's strength (as well as his sore feet!) were with me then, as they were now. It was very good to be adventuring with him again after such a long time. Doug and another former student, Sheldon Green, had been mountain climbing in British Columbia and had driven from Vancouver to meet us in the shadows of the Tetons. Two other veterans of past adventures, Garrett Reisman and Simone Francis, had come to our rendezvous from the opposite direction, from Houston, Texas. After teaching me the rudiments of climbing, Garrett had gone on to other missions as a NASA astronaut. It was marvelous to see Garrett and Simone again.

But, most of all these were watershed days for one of the central figures in our canyoneering adventures, Clancy Rowley. At the end of his years as a graduate student in California, Clancy had decided to drive to New Jersey where he was

to take up a faculty position at Princeton - and he decided to detour via the Tetons. Clancy had been my trusted companion and fellow adventurer for an era of spectacular adventures. Together we had pioneered more than a dozen technical canyoneering routes in the San Gabriels; we had conquered Cathedral Peak in Yosemite, Weaver's Needle in the Superstitions and Picacho Peak in the California desert. We had traversed the wildness of the Wonderland of Rocks in Joshua Tree National Park and had explored the haunted Tenaya Canyon in Yosemite. In Utah we ventured into the deepest slot canyons of Zion National Park including the Zion Narrows, the Subway, Mystery Canyon, and Pine Creek. He had saved me by a fingertip in the wilds of the Sespe Wilderness and willed me the strength to climb out of the Grand Canyon. With my 60th birthday looming ahead, it was hard for me to envisage embarking on future adventures without Clancy. I would miss not only his strength, agility and climbing skills (for he had always led) but also his compassion, his understanding and his kindness. Though separated in age by more than 30 years, Clancy had become a boon companion. So it seemed that the Grand Teton would also be a watershed moment for me.

Clancy had driven from Pasadena to the Grand Tetons and met me when I stepped off the plane at the small Jackson, Wyoming, airport. We headed into Jackson to get some lunch and there I experienced a series of incidents that reminded me of my own beginnings and shook me to my core. We were seated in a booth in a hamburger joint perusing some of the maps and guides to the Grand Tetons that I had brought with me. After a few minutes I became aware of the family of three seated in the adjacent booth. I think my subconscious registered first but it was several minutes before I became aware of a feeling that was simultaneously strange and yet also very familiar. It was not that I had ever seen these people before. Nor were they in any way remarkable. Rather I became aware that their accents could only mean one thing, namely that they came from within 10 miles of the rural backwater of Northern Ireland where I grew up. To most Americans it seems incredible that accents could change so rapidly with distance that people's homelands can be located with such accuracy. But there was no doubt in my mind. So, at an appropriate pause in their conversation, I intruded and enquired about where they lived. Yes indeed, they hailed from the village of Draperstown, only about five miles from my home village of Magherafelt and six thousand miles from where we were seated. We chatted about common acquaintances and it transpired that they had known my father when he was the surgeon in the local district hospital. Though they did not recognize my much altered accent, they were as astonished as I was by such a remarkable coincidence. Clancy was speechless with amazement. For me the coincidence was also disequilibrating; it seemed a portent of other beginnings or endings yet to come.

Then something happened that truly disquieted me. Clancy had not taken part in the conversation but the woman looked at him and asked "And is this your son?". I was stunned as if by a gunshot. Ever since the terrible death of my 23-year-old son Patrick in a 1997 automobile accident, I have dreaded small-talk questions like "How many children do you have?". Somehow, I have

learned to struggle through them. But this one truly stunned me since it was so unexpected. I mumbled something about Clancy being a student and then struggled with parting pleasantries so that I could breathe the air outside. I would have been delighted to answer her question in the affirmative and would have done just that but for the shock of the moment and the embarrassment it would have caused Clancy. My mind raced with emotions and I was glad of the moments in the parking lot in which to recover some equilibrium.

In the subdued aftermath, we drove north past the airport and a few miles further into Grand Teton National Park. At the end of a dirt turnoff about 4 miles north of the park entrance on Teton Park Road, we located the Climber's Ranch where we found bunkhouse accommodations for the night at the remarkably cheap rate of \$6 a head. The ranch was built specially for climbers and consists of a group of cabins with a central dining shelter as well as washing and bathroom facilities. The place has great atmosphere and camaraderie; others more knowledgeable about the Tetons are happy to give help and advice. In the early evening Garrett and Simone arrived with abundant pizza and beer and it was late before we began sorting out the technical equipment we would need to carry with us the next morning. Doug and Sheldon were already high on the mountain. Having obtained the necessary camping permit the preceding day, they could not resist taking off into these beautiful mountains. We had arranged to meet them at the Moraine campground the next evening.

Early the next morning the four of us drove a short way to the Lupine Meadows trailhead (elevation 6732ft) with its large parking area and started off along the gentle trail that gave no hint of the enormous challenges ahead. The route proceeded south along the wooded edge of the meadow and then began a 1700ft switch backing ascent of a steep pine-forested slope. As we climbed our view of the Jackson Hole flatland broadened and soon the lovely, deep blue Bradley and Taggart lakes lay below us. As the trail turned west and began contouring into Garnet Canyon an even more spectacular scene opened up. Garnet is a delightful high country canyon with crystal cascades and small mossy meadows amongst massive boulders. Higher up we were treated to the first close-up view of the Middle Teton, looming over the head of the canyon and sliced through by a striking linear dike. Continuing to climb, the trail eventually met with Garnet Creek at a place where there is a camping area known as The Platforms (elevation 8960ft). This marked the end of the developed trail, and we stopped here to have lunch beside the sparkling stream.

Beyond the trails-end we clambered over and around a group of large boulders before reaching more level ground. The use-trail then followed Garnet Creek for about 0.5 miles to a high alpine meadow with a popular campground known as The Meadows (elevation 9400ft). Here, at the head of Garnet Canyon, we were close to the tree line with mostly glacier and rock all around. Two steep valleys, the North and South Forks of Garnet Canyon, descend into The Meadows. Our route through the North Fork switchbacked up a steep and partially wooded slope above the Meadows and climbed around to the right of a lovely waterfall known as Spalding Falls. These are fed by water from the Middle Teton Glacier still out of sight and high above us in the North Fork. Beyond

Spalding Falls the trail crossed the stream at a camping area known as the Petzoldt Caves, a name that refers to campsites dug out under huge boulders. Here we passed the last trees at an elevation of about 10000ft and began to ascend a steep, barren talus slope that eventually crested at the top of a great moraine. Created by the Middle Teton Glacier that deposited a massive rough platform of rocks, this moraine formed a mile-long horizontal perch in this otherwise vertical terrain high on the side of the Teton peaks. As the glacier retreated it left this perch bounded on the right and at the head by rock walls and on the left by the remnants of the ice. A series of small tent-sized clearings sprinkled over the wide boulder field constituted the Moraine camping area. Each site was protected by camper-built rock walls that provide some shelter from the frequent winds.

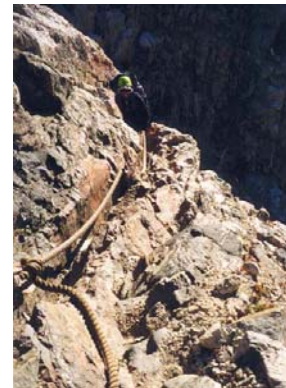
We reached the bottom end of the Moraine camping area (elevation 10750ft) about 6hr and 6.2 miles from the morning start. Here we expected to find Doug and Sheldon but they were nowhere to be seen. We made our way up the braided trails that led through this much-dispersed camping area, looking for them at every site. Reaching the bottom of the steep talus slope at the head of the canyon where the last sites were located we had to conclude that Doug and Sheldon had not yet arrived. We set up camp at this highest group of sites (elevation 11000ft) and, fortunately, Doug and Sheldon arrived shortly thereafter. They had detoured en route in order to summit the Middle Teton successfully. Over dinner, we talked of plans for the next day and finally settled down for the night.

We slept longer than we had planned and, after breakfast, began hiking about 7.30am. At the top of the steep talus slope in the head of the canyon, was the first technical obstacle of the day, a 40ft climb up an easy cliff using a very thick, fixed rope and many good footholds. From the top of the rope climb, the trail switch backed up about 200ft to the broad Lower Saddle (11650ft) that lies between the Grand and Middle Tetons and is readily seen from the valley far below. Here we took advantage of the last available water on the ascent to pump several bottles from a trickle of glacial melt. Two Exum Guide huts and a number of windswept campsites (protected by stone walls) also occupy the Lower Saddle.

From the Lower Saddle we were treated to the first views west into Idaho. Below lay the broad South Fork of Cascade Canyon, another popular hiking route with a developed trail. The view to the south was dominated by the bulk of the Middle Teton, clearly a very difficult technical climb from this starting point. Looking north the trail proceeds north-eastwards up the crest of a broad ridge toward the mass of the Grand Teton. Straight ahead we could clearly discern the broad horizontal band of black rock known as the Black Dyke running across the bottom of the mountain. When the trail steepened, we followed the use-trail straight up through the Black Dyke, directly toward a large cliff that blocks the route straight ahead. At the cliff, we turned left and followed a well-worn trail around the foot of the cliff and into a talus-filled gully. Just about 50ft up this gully, after just one switchback, we encountered the trickiest navigational challenge on the ascent to the Upper Saddle. Called the "Eye of the Needle"



Grand Teton from Jackson Hole.



Left: Lower Saddle from the Moraine. Right: Ascending the fixed rope.



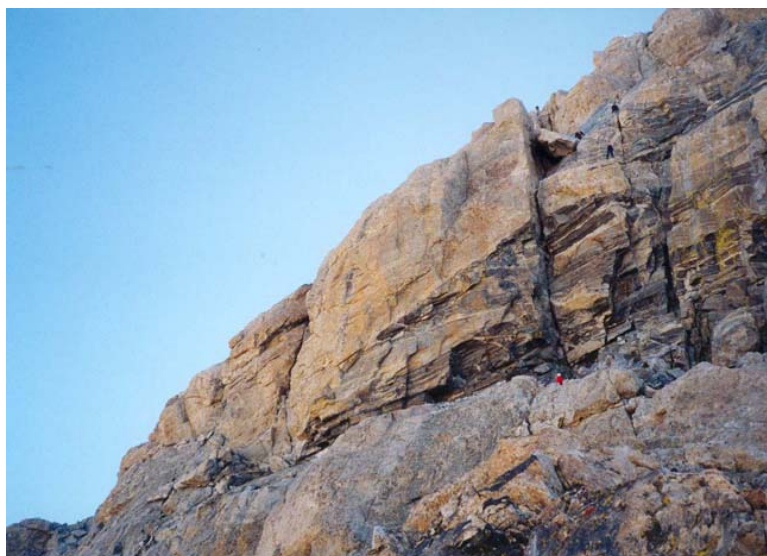
Left: Looking up from Lower Saddle. Right: View south from Upper Saddle.

in the guidebooks, we found the available diagrams and descriptions of dubious value. Only after several errors did we recognize the correct (and quite simple) route. After the trail arrives in the talus-filled gully and makes one switchback across it, you should look to the right and find a steep rock ledge that begins broad but narrows as it rounds a promontory. Like many folks we proceed up this ledge (it had a cairn on it) and then found serious technical challenges around the corner. Though we finally found our way past those challenges, we later recognized that we should not have ascended the broad ledge with the cairn. Rather, we should have proceeded about another 20ft up the talus-filled gully to a much less obvious ledge trail that proceeds right under an overhang to a bench. Known as the “Eye of the Needle” that bench is directly above the start of the broad ledge. On the way back down the mountain we chose to rappel down about 90ft from the “Eye of the Needle” bench to the talus-filled gully.

From the “Eye of the Needle” bench, the route up to the Upper Saddle (elevation 13100ft) proceeded straight up a broad gully. Staying to the right at first and then crossing over toward the left, we relocated a well-worn trail in the talus slope that switchbacked up to the Upper Saddle. There we were treated to awesome views both to the south and, newly revealed, in the northern direction. To the south we could now see all the Teton peaks at the southern end of the range and, in the distance, the city of Jackson. To the north 12928ft Mount Owen was half hidden behind the mass of the Grand and, below, an almost vertical 5000ft drop into Cascade Canyon. Its waters fill Jenny Lake that, in turn, flows into Jackson Lake, visible to the northeast. In between the awesome drop-offs to the north and south, was the massive cliff to the east, the vertical side of the summit block of the Grand Teton. Standing at the Upper Saddle, it was hard to see how there could be any way to surmount that huge summit block towering above us. Cliffs of over 100ft rise vertically overhead as far as one could see on both sides. The drop-offs to both the left and the right are huge.

However, from the Upper Saddle a use-trail climbs a short talus-covered ridge running up to the base of the cliff around the summit block and thence to a rocky platform at the bottom of rappel descent of the cliff. We reached this waypoint (elevation about 13200ft) about 3.5hr after the morning start. Here we encountered other groups descending from the summit block by way of the two, side-by-side rappel routes about which more later. From here our chosen route was obvious for off to the left there was a narrow and narrowing ledge, the beginning of the Owen-Spalding route. About 30ft from the bottom of the 120ft rappel and just past a chimney called the Wittich Crack, we encountered the first technical and constitutionally challenging part of the route, a series of very exposed obstacles on a narrow, horizontal ledge. The first of these obstacles, known as the Bellyroll, is formed by a large slab that has detached from the rock face. Here we donned our harnesses and prepared for the technical part of the ascent.

Roped up and belayed we made our way around this slab by hanging onto its top edge and using the modest footholds on its steep outer face. The length



Summit block from Upper Saddle.



Left: On the summit of the Grand Teton. Right: The 120ft rappel descent.

of this maneuver is only about 10ft and it would have been easy were it not for the vertical drop of several thousand feet directly underneath! Beyond the Bellyroll, we accessed a small but comfortable shelf that quickly narrowed to a horizontal tube-like ledge known as The Crawl. I wiggled through The Crawl though others, on a belay, transitioned around in the same way that they did the Bellyroll. Again the exposure was enormous. As the tube of The Crawl widened again, there was another, detached slab similar to the Bellyroll. Just beyond that was the deep and easy Double Chimney (5.5 at most). Entering the recess of that chimney meant some relief from the enormous exposure and allowed a little relaxation. About 20ft of easy climbing led to the top of the Double Chimney. There we emerged onto a recessed platform and paused to

recover our equilibrium.

Sitting there in the sun, enjoying the panoramic view, we reviewed our next challenge. Other passing climbers reminded us that there are two ways to get from this platform to a long, broad and comfortable ledge that runs horizontally across the summit block about 50ft above where we were perched. The first is the obvious Owen Chimney that runs up from the back of the platform. The second and quicker route is a series of angled ledges known as The Catwalk that proceeds around to the south. However, the Catwalk is very exposed, especially the first 20ft around a promontory. We opted for the Catwalk. So I casually asked Clancy whether he wanted to proceed around the promontory with a belay line and was somewhat startled by the firmness of the negative response. Same response from Garrett. And so I suddenly realized that we had reached a crux in our adventure. If we were going to reach the top I would have to lead us there. So we set up a belay line, I made my way to the apex of the promontory, climbed about 6ft up the arete to another ledge and anchored myself to a convenient hole in the rock. Having converted the belay line to a handline, the others then made their way up to the anchor point and proceeded onwards along the Catwalk to its end at the broad ledge. Back at the anchor point Clancy and Garrett were the last to surmount the promontory hurdle. Their murmurs of admiration exhilarated me. Somehow, I felt a new beginning. I had for so long relied on these two to undertake the more dangerous tasks. Now, suddenly and unexpectedly, despite my age, I had joined them as an equal in leading our group. Quiet satisfaction suffused me. I would lead this group to the top of the Grand Teton.

The three of us continued for about 150ft up the angled Catwalk to the broad ledge at the point where the top of the 120ft rappel is located. Some of the others had dispersed along the ledge looking for the next chimney, but we soon regrouped and set off on the final leg of our ascent. A short distance north along the broad ledge I located the obviously climbable crack know as Sargent's Chimney. To be certain that I had identified the right chimney I went a little further north along the ledge to where it ended in the much larger Great West Chimney and then I backtracked. In the absence of ice, Sargent's Chimney was a lovely (and fairly easy) free climb of about 120ft. The exhilaration was still with me as I flew up it, leaving an extended line of my companions behind me. This was not just bravado; we had very limited time left and I had to ascertain the correct route to avoid any further delays. At a bolted rappel point I exited chimney left onto another broad ledge, above which it was clear that the slopes would allow an easy scramble to the summit. Proceeding northeast I found a use-trail that bypassed a 25ft slab and then a short final 20ft chimney. Suddenly, I was on the 13770ft summit of the Grand Teton. It was a moment of supreme accomplishment. Not only had I made it to the summit of this majestic mountain, but I had found in myself a strength and resolve that I did not know I had. I had deployed both the strength and my leadership to bring all of our party to the top. It was indeed a special beginning for me.

But there was one serious problem. We had hoped to reach the summit by 1.00pm in order to leave time for a comfortable, daylight descent. It was

now 5.00pm! I would seriously fail my friends if they were to be trapped on the mountain for the night. Therefore speed was of the essence. I could only enjoy the summit for a few minutes before starting down. Indeed, only Doug arrived while I was there. I regret that I did not share that special moment with Garrett, Simone, Clancy and Sheldon. All made it to the summit but only after I passed them on my way down.

Fortunately, we were skilled at setting up rappels and so the 100ft rappel descent of Sargent's Chimney and then the spectacular 120ft Owen-Spalding free rappel from the horizontal ledge down to the Upper Saddle area were carried out very efficiently. As we sat awaiting our turn at the top of the Owen-Spalding an elegant white glider circled us like a great mute gull acknowledging our accomplishment. We then hastened down the use-trail past the Upper Saddle and down the talus slope to the "Eye of the Needle" bench. Another efficient rappel took us into a talus-filled gully, from which a well-worn trail proceeded left around the cliff-base to the top of the Black Dyke. Though the light was fading as we climbed down through the Black Dyke and hiked down the ridge toward the Lower Saddle, our anxiety had eased for we were now quite certain that we could get back to camp from here in the dark. It was 8.00pm and we had but a few minutes of twilight left as we passed tomorrow's hikers huddled around the Exum huts and made our way down to the fixed rope descent below the Lower Saddle. Here, with the end of the days exertions now palpably in sight, I began to feel very weary. But it was only a matter of minutes before we finally arrived back at our campground. I could only managed a cup of broth before I had to climb into my sleeping bag.

The third day dawned bright and beautiful and the exhilaration of the preceding day returned as we breakfasted and packed for the descent to the valley below. This was the easy part and we were all buoyed by the achievements of the day before. As any party is likely to do on a carefree descent we tended to spread out so it happened that I spent some time alone on the trail with each of my good friends. Doug seemed elated despite his sore feet and talked of times ahead. Simone and Garrett were already planning yet another extemporaneous detour on their way back to Houston. And Clancy and I talked of the very different challenges he would face as a young faculty member at Princeton. We also talked of future adventures, they with the confidence of youth, me with an unspoken uncertainty born of my age and declining abilities.

It was Clancy who drove me to the airport that evening for my flight back to California. We said a quick goodbye for my emotions would not allow me otherwise. Everything that needed to be said had already been said and experienced high on the Grand Teton and on a kaleidoscope of other adventures over the past five years. A magnificent journey was spiritually complete. The beginnings and endings were now sharply in focus. George had it right.

Chapter 30

SINGING DUNES

*“They cannot scare me with their empty spaces
Between stars - on stars where no human race is
I have it in me so much nearer home
To scare myself with my own desert places”.*

From “Desert Places” in “A Further Range” by Robert Frost (1936).

Out in the vastness of California’s Mohave Desert, in a place where no-one lives and few ever venture, there is a 40 mile stretch of wind-blown sand known as the Kelso Dunes. Superficially there is nothing unusual or surprising about these dunes unless you happen to be nearby during one of those special moments when the wind blows and these dunes resonate with the most amazing and other-worldly noise, a loud low-frequency rumble that, as yet, defies scientific explanation. In the geological literature they are known as “booming dunes”; the documentation suggests that the phenomenon is rare, that it occurs at only about 30 sites around the world. Wherever they are found, they are the subject of much primitive legend and myth, whether in North Africa, in Australia or in the southwestern United States. We know that the noise is emitted when the wind builds the steep slope on the leeward side beyond its maximum sustainable gradient. When the slope then fails, it generates an avalanche of sand that also triggers a deep resonance within the dune. The sound emerges as an eerie, single tone that can continue for many minutes and can be heard for miles around. Ever since I first heard of this bizarre natural phenomenon I have wanted to witness it first hand.

So it was that one day in March 2002, graduate student Steve Hostler and I left Pasadena about 8.00am and traveled Interstates 210, 10, and 40 into one of the most desolate places anywhere in the world. Interstate 40 crosses the Mohave Desert from the city of Barstow to the town of Needles on the Colorado River, a 144 mile stretch of road with only a few small outposts of human presence along the way. About 51 miles east of Barstow we passed the wayside



Left: Kelso Dunes from the trailhead. Right: Windblown sand and the steep lee slope.

stop called Ludlow, a small cluster of buildings with a gas station, the last supply point for many, many miles. Another 26 miles east of Ludlow, we came to the well-marked exit for the Kel-Baker Road. Leaving the highway we turned to travel north on this good two-lane asphalt road, almost immediately entering the Mohave National Preserve. The Kel-Baker Road proceeds north over a low saddle in the Granite Mountains and then continues north in a gradual descent over the flat alluvial plain on the north side of the Granites. At the saddle a broad vista opens up to the north, the bright yellow dunes clearly visible in the distance. Scattered over a flat plain, they seem to stretch from the distant northwest horizon to a terminus at the bottom of the long and gradual upslope created by the Granite mountains.

It was cold (in the low 50s?) and windy here. The turn-off to the Kelso Dunes viewpoint was just 100yds past an easily recognized pumping station on the left side of the road. There we turned left onto a well-maintained dirt road that headed west, arriving after 3 miles at the restrooms, sign boards and parking area that constituted the welcome at the Kelso Dunes trailhead.

Though the direction often changes, the most common wind is from the west. Far away in that direction, it funnels down the wash of the Mohave River, through a narrow canyon and out onto a broad flood plain that stretches off to the southeast for almost 40 miles. The sand carried along this route over many eons has piled up in a series of dunes, the last and largest of which lies in an EW direction just to the north of where we were now parked. We could see the dramatic ridge of dunes out across the sand, the highest peak bearing off to the northwest. Though it appeared quite close, the summit was over 2 miles from the trailhead and 560ft higher in elevation.

From the trailhead a use-trail headed directly toward the peak, petering out after just 200yds where it crossed the distinct boundary of the sand dune material. We then ploughed across a series of low dunes, most with sparse grass-like vegetation. These gradually increased in height, elevation and sand mobility. With more mobile sand, the vegetation became thinner. Hiking through soft sand on steep slopes is not easy and so this was a more difficult hike than might have been imagined. Where the sand had been disturbed (for example along the trail) or recently deposited (on the steeper lee slopes of both the large and small



Left: Close-up of the crest. Right: View along the crest.

dunes) it yielded easily underfoot. However on the tops of many of the foothill dunes where the surface had been scoured by the wind the surface was markedly different. Not only was it quite firm underfoot and therefore much easier to hike on but it also looked different, having larger, more visible black grains, probably of volcanic origin. This gave the surface a gray color, sometimes in bands running roughly perpendicular to the direction of sand transport. This coloration was in marked contrast to the light yellow color of the steep lee slopes. It seems that a process of sand sorting is occurring on these small and moderately-sized foothill dunes. The small grains (yellow colored) are being preferentially removed from the relatively flat tops and deposited on the steep lee slopes thus leaving a greater proportion of the larger black grains behind to produce the gray coloration.

The route steepened markedly as we approached the bottom of the slope leading up to the crestline. There appeared to be two common climbing routes. One was the direct route that necessitated a long and very steep final climb to the summit. We took the alternate route and headed for the saddle about 75yds east of the high point. By following the firmer, gray-tops of the foothill dunes we climbed to within about 20ft of the crest of the saddle. Over the last 20ft we had to crawl up the loose lee-side sand.

We paused at the saddle to look around. My impression was that the sharp crest of the dune consists of a steep pile of very fine sand sitting like a triangular cross-sectioned dike on top of a lower ridge of firmer, less-mobile sand. The wind (from the north on the day we were there) seems to carry only the very smallest grains to the crest. There the particles become airborne and are deposited by falling onto the very steep lee slope. The ridgetop geometry is extremely uniform and well-defined; it extends for miles in both the east and west directions. In cross-section the crest consists of a fairly steep windward slope, a small flatter area on the top, a sharp break and then the very steep leeward slope (30-45 degrees).

From the saddle, we trudged the additional 75yds to the highest peak, arriving there 1hr 20min after leaving the trailhead. The summit had the added feature that it was at the junction of the main crest and a secondary crest that branched steeply down the south facing slope in a southwesterly direction. This

seemed caused by wind blowing both over and around the peak.

The wind at the crest was much stronger than we experienced even 100ft down the northside. Sand was blowing everywhere, getting into everything, coating our lips, eyes and nostrils. When I sat down to rest the density of wind-blown sand impacting my face was much greater than when I was standing. Thus I estimate that the thickness of the blowing sand layer on the windward side at the crest was about 3-4ft. This sand is then projected (roughly horizontally) over the top and cascades down onto the steep leeward slope.

The leeward slope at the ridgeline is so steep that by kicking on the crest one could generate a small landslide (perhaps 2-3ft in width) that would proceed slowly, almost viscously, downhill. The typical speed of these small landslides was no more than about 1ft/s. But they would continue (unexpectedly) for minutes, usually until they reached the bottom of the lee slope. These landslides also occur naturally without human intervention and leave vertical striations all the way across the lee slope. We also observed similar landslides on the lee slopes of the foothill dunes. However, during our entire climb we could hear no sound from any of these naturally occurring landslides and so began to speculate on why we could hear no “booming”. Perhaps, we thought, the day was too cold for booming.

After a pause, we got to work and loaded a large bucket of sand into one of the backpacks for transport back to the laboratory. Then, having apparently failed in our effort to hear the booming, we decided to head straight down the lee slope on our way back to the trailhead. The only way to do this was to sit down and slide. Within a few feet of descent we had set into motion a much larger area of sand than occurred with the small landslides. Then it happened. There emerged from under us the most awesome rumbling tone, increasing in volume as we continued to slide and persisting as long as the mass of sand was moving (and maybe even a little longer). It was an eerie and other-worldly experience. The whole dune seemed to shake as though, deep within, there was a large resonating cavity. This sound continued as we descended the 150ft steep lee slope but became more muted. About 50ft down from the summit we encountered a slope with some vegetation but still very steep. Even on this slope we could still detect the booming though it virtually disappeared near the bottom. It was a marvelous, exhilarating experience that sowed the seeds of a determination to find the origin of this mysterious phenomenon.

Excited and determined, we began our hike back to the trailhead, taking turns to carry the backpack with our precious 80lbs of “booming” sand. On the way back we tried several times to make the lee slopes of foothill dunes boom but detected only very slight squeaking noise, never the low frequency rumble that so awed us at the summit. We arrived back at the trailhead about 3hrs after setting out. Then, determined to make full use of our efforts we hiked back to the foothills to collect a second sample bucket of sand, this time from the area below the steep lee slope.

After a late lunch, we drove west along the increasingly rough dirt roads that parallel the south edge of the dunes. Our intent was to try to gather a third sample bucket of sand from a different geographic location. About 3 miles

west of the restrooms, the rough dirt road came within about 100yds of the edge of the dune sand. There I spotted a faint track down a shallow draw and headed down that track to try to drive closer to the dunes. We crossed a wash and found very soft sand at the far side. My vehicle would normally have no difficulty with this except that it was not in 4WD, despite the fact that I had put it in 4WD and the warning lights said it was in 4WD. The result was that when we tried to backtrack we became inextricable stuck in the sand in the middle of absolutely nowhere.

Steve and I tried for about 2hrs to either get it into 4WD or to get it out of the ruts it had dug. First we tried digging ramps in front of the buried rear wheels. The vehicle would just bury itself again. Then we tried lining the ramps with two old Mexican blankets I carry in the car. That only resulted in chewed-up blanket. After 2 hours we had managed to move the vehicle about 4 feet. It was clear that we would need outside help. Though I did have a cell phone I doubted that I could get a connection this far from any civilization and so I made plans to hike the 10 miles or so to help, thinking that I would leave Steve with the vehicle since he was less accustomed to long distance hiking than I was. But before setting out I decided to try my cell phone anyway; I was quite surprised that someone quickly answered when I dialed 911. It was the Mohave National Reserve Ranger Station. They noted my verbal description of our position and said that they would summon the special off-road vehicle recovery service in Baker, about 50 miles away at the northern end of the Kel-Baker road. We settled in to wait, for it would be more than an hour before this help could arrive. After a while we chose to climb to the top of a small hill where we would have a wide view of the desert off to the east and so be able to spot an approaching vehicle.

They took about 1.5hrs to arrive. Sitting there on our hilltop, scouring the horizon for any sign of the approaching rescuers, we were somewhat bemused by the approach of an unmarked helicopter and positively alarmed as it began to circle overhead. Clearly they were assessing the situation on the ground below. I had heard stories of illegal immigrants trying to cross through this unoccupied land and wondered if the helicopter might be trying to assess this possibility. Alternatively one sometimes hears stories of drug smuggling to remote desert airstrips. Leaving Steve on the hilltop, I walked back to my stranded vehicle in an effort to reaffirm our connection with it. Then the helicopter descended and landed about 100yds away. I moved slowly toward it but stopped as two aliens emerged from the small cockpit. Dressed from head to toe in gold lame suits, their heads encased in dark glass helmets, I truly began to wonder if I was hallucinating. But their soft California voices dispelled the craziness and I could now make out the California Highway Patrol labels on their flight suits. Apparently, the off-road vehicle recovery unit could not, at one point, get through to my cell phone and so they had asked the CHP helicopter to check our location and condition. Once I reassured them that we had enough water and blankets to last the night should that become necessary, the CHP aliens left us alone again in the middle of absolutely nowhere.

Steve and I again took up our vigil on the low hilltop. Finally, only about

15 minutes before sunset, we spotted the dust of the off-road recovery unit approaching from the east. Soon we were in cell phone contact and I was ready to guide them across the desert to our lonely resting place. First, however, the ungainly vehicle stopped about a mile away. It was then that we recognized that it consisted of a truck with an off-road vehicle mounted on the back. This rugged jeep was unloaded and then driven the final mile to where we were waiting, guided there by cell phone communication from my hilltop. The jeep had no trouble crossing the loose sand and winching my vehicle out to firmer ground. There were just minutes of twilight left.

If I had not had such a feeling of relief, it might have been anti-climatic. As it was I paid the hefty three-figure charge for the five minutes of work by the off-road recovery unit and then set out for home. In the heat of the moment, we failed to collect the third bucket that had been the cause of our grief. But we did remember to reload the first two buckets; Steve had hidden them behind a bush so that our elicited purpose would not be detected during the visit from the airborne cavalry.

Just another routine day at the lab.

Chapter 31

LAKE POWELL

“For a transitory enchanted moment man must have held his breath in the presence of this continent, face to face for the last time in history to something commensurate to his own capacity for wonder”.

From “The Great Gatsby” by F. Scott Fitzgerald.

The great orange and ocher cliffs rise majestically out of the steel-grey waters and soar toward a cloudless sky. It is an awesome place, this man-made lake, Lake Powell, truly a land for the brave. Set in one of the wildest and most remote landscapes in the world, it has both magnificent scale and special grandeur.

In earlier times, before the construction of Glen Canyon Dam, the ruggedness of this wilderness presented an almost impenetrable barrier to western-bound adventurers. South of Moab in east-central Utah, the mighty Colorado River, over many millions of years, carved an immense and virtually impassable rent in the face of the earth. This gash runs about 400 miles southwest and then west through Cataract Canyon, Glen Canyon and then the Grand Canyon. South of the Grand Canyon lie the inhospitable deserts of Arizona, California and Mexico, extending all the way to the Gulf of Cortez. So to travel west, the early explorers and settlers (except for a few foolhardy souls) were forced a long way north, through Moab and Green River.

Native Americans, known today as the Anasazi (Navajo for the ancient ones), adapted to the merciless heat and the paucity of water and, in small numbers, had managed to survive in this arid land. Indeed their stone granaries and kivas can be found in many of the canyon cliffs. But even the Anasazi were overwhelmed by drought (and other factors) and moved south in the 1300s to create the modern Pueblo settlements of Arizona. In later centuries, the Navajo, though located primarily to the southeast, filled the vacuum in a minor way (along with a few Utes and Paiutes from the north and west). They used this wilderness on an occasional basis and only in very small numbers. Consequently, it was largely unoccupied when the white man was confronted by it.

There are several epic stories of expeditions that tried to cross rather than circumvent this wild place. Indeed it is a land that only the daring would venture into. Some understood the risks necessary to reap the rewards of this wilderness, others did not. In the 1770s, during the Spanish colonial period, a party of priests headed by Fathers Dominguez and Escalante, having made their way west by the northern route, tried to return east through southern Utah. Theirs is an epic saga of struggle with the wilderness and the place where they crossed the Colorado became known as the "*Crossing of the Fathers*". It now lies submerged under Lake Powell, more specifically under Padre Bay. More than 50 years passed before a second crossing was made by a party of Mexican traders. Another half century passed with very few venturing into the wilderness. Then, in 1869, there occurred one of the greatest expeditions of exploration ever undertaken. A one-armed ex-soldier by the name of John Wesley Powell with a party of nine other men disembarked from the train in Green River, Wyoming, outfitted four small wooden boats and set off to float the entire length of the Colorado canyons. Powell's dispassionate account of their hair-raising adventures descending the entirely unknown cataracts of the Colorado through Glen Canyon and the Grand Canyon is a must-read for any serious student of adventure. Miraculously, all but three of the men survived. The three who did not had abandoned the expedition and climbed up out of the Grand Canyon onto the Kaibab plateau where they were killed by Shivwits Indians.

The next 70 years saw some small scale cattle ranching and the beginnings of tourism in a few accessible locations such as the South Rim of the Grand Canyon. A Mormon refugee from justice by the name of John D. Lee fled south and descended the Paria river to its junction with the Colorado. There he established the first regular river crossing at a place that now bears his name. Today Lee's Ferry is still an important crossing and the starting point for most rafting expeditions down through the Grand Canyon.

In 1956, the US Congress, after much debate, approved a Bureau of Reclamation plan to tame the wild Colorado. Work began almost immediately on the Glen Canyon Dam located where the Colorado crosses from Utah into Arizona. The dam, about 600ft high, was completed in 1963, but the lake behind it, named Lake Powell after the one-armed adventurer, took another seventeen years to reach its high water mark. Unlike almost any other reservoir, Lake Powell, is not one large body of water but a whole branching network of narrow channels where the water backed up into a maze of canyons. The lake is almost 180 miles long and its shore line stretches for an amazing 1900 miles. Today it is a wonderland that is most readily explored by boat. We planned to explore a little piece of it.

Friday, June 7, 2002, was a joyous and exciting day for Doreen and I when the whole family came together in the Marriott Courtyard Hotel in Page, Arizona, the town built to serve the Glen Canyon Dam. Doreen and I had driven there from California, spending a night en route in the lodge at Zion National Park. Our elder daughter Dana with her two children, Quinn and Gavin, and our younger daughter Kathy with her two children, Troy and Payton, flew into

Phoenix from Philadelphia and Chicago respectively and then drove north to Page in a rented minivan. The reunion was joyous indeed. We were all deeply excited and, perhaps, a little uncertain about the trip we had planned in a rental houseboat on Lake Powell. But that was not until June 9. We spent the next day, Saturday, exploring the Upper Antelope slot canyon (Navajos took us there in a truck), swimming in the hotel pool and shopping in the supermarket for all that we would need over the next four days.

On Sunday, June 9, we rose early and eagerly. The wind was blowing quite strongly and I could not help be concerned about how difficult it would be to maneuver the boat under these conditions. But there was no time to dwell on it. We packed all our stuff into the two vehicles and drove down to the Wahweap Marina where we completed the formalities to rent a 36ft houseboat for four days. I also rented a small boat with an outboard motor, what they called a "Livingstone". Then we walked down to the rental dock, located our houseboat (number 91) and waited for the instructor to show up and give us instructions on the operation of the houseboat. She was quite brief, too brief - especially about the controls for the two large outboard motors that powered the houseboat. Then she drove the houseboat over to the next dock (called the T dock) where we tied up and began the process of bringing all our gear down from the vehicles and loading it onto the boat. Fortunately there were porters with carts and small tractors that did much of the work for us. At this time I also walked back to the rental dock to fetch the Livingstone. Inside the break water it was easy to drive despite the wind and waves. However, one of the staff present decided that the Livingstone was too small for the wind and waves that day and offered me a larger powerboat for no extra cost, an offer I gladly accepted. Thus we ended up with a larger powerboat - but without any instructions as to how to run it! The staff drove both the houseboat and the powerboat out beyond the breakwater, tied the powerboat into a towing position behind the houseboat, turned over the controls to us and left in another powerboat. We were on our own.

Despite the wind and waves, it proved easy to drive the houseboat and, from Wahweap, I headed directly over toward the main channel in Lake Powell. That channel follows the original course of the Colorado River. We readily found the buoys that mark it and turned to head up Lake Powell. Navigation turned out to be easier than I thought. Red buoys mark the right side of the channel going upstream and green buoys the left side. Both are adorned by a large number, the distance in miles from the Glen Canyon Dam. Since our National Geographic Trails map of Lake Powell showed these buoys and their numbers, we could easily locate ourselves. Gavin, especially, liked looking out for the numbers. Occasionally there was no buoy to be seen, but by heading straight a buoy would eventually come into view. There were also signposts at the larger intersections.

Despite the waves kicked up by the unpleasant wind (35-50mph gusts), the houseboat was steady and moved along at 8 or 9 knots. We rounded Castle Rock, turned right and then left into a section called the narrows. Dana drove the boat from the time we rounded Castle Rock until the end of the trip while



Left: In Gunsight Bay. Right: Lake Powell.



In Cathedral Canyon.

I helped with the navigation and other deck duties. Kathy made lunch. Doreen made sure the kids wore their life-jackets when they came out of the cabin. Because of the wind and waves, water often ran up onto the fore-deck. The kids enjoyed the excitement of the water splashes and were soon soaking wet. We began to feel some modicum of confidence that we could handle this adventure.

After passing through the Narrows, we turned left into the large bay at the mouth of Gunsight Canyon. At the head of that bay, quite a few other houseboats had stopped at widely spaced spots on the many beaches. We picked out a spot at a beach in a beautiful cove with a high cliff behind it. It was on the west side of Gunsight Bay and, following instructions, we ran the boat onto the beach at full power. As we did so I rushed to set the anchors though, if I had stopped for a moment to examine matters, I would have seen that they were hardly necessary. As I did so I became aware of distress at the back of the houseboat and Doreen ran forward to tell me that Kathy was badly injured. Moreover, the powerboat seemed to be drifting free; fortunately the wind blew it towards me and I soon secured it. Then I jumped on board to find out what had happened to Kathy. Apparently as we had accelerated the houseboat forward to ram it onto the beach, the tow line to the powerboat had suddenly snapped. More specifically the metal link joining the tow line to the powerboat had snapped and the rope and half the link had rocketed forward, striking Kathy on the chest. She was badly bruised and very shaken but otherwise

seemed alright. Doreen applied ice to the bruises and we waited to see how she would be.

The wind was still blowing but seemed to be easing. The staff at Wahweap has assured us that this was the last day of the wind and that the weather would be excellent the next day. For the rest of the afternoon the kids played on the beach and we enjoyed the scenery. I took the powerboat and briefly explored Gunsight Canyon though I did not go far. There were many boats moored and beached at the place where the canyon narrowed. The kids explored the virgin beach while Dana, Kathy and Doreen relaxed. Though badly bruised Kathy did not need further medical attention.

Dana and Kathy prepared dinner and we sat and talked with gin and tonics. As night fell we organized our sleeping arrangements in preparation for an early night. Troy and Quinn were to sleep in the bed in the aft cabin, Dana with Gavin and Kathy with Payton in the two beds in the fore cabin and Doreen and I on the fore deck (Doreen had a foldup bed). As we said our goodnights, Kathy asked: "*Dad, have you tied Mum down?*" Doreen was marvelous, never having slept in the open before. She loved the star-studded night sky.

Monday, June 10, dawned beautifully and we were keen to be on our way. After breakfast we released the anchors and, with only minor difficulty, managed to start both engines. We then put the engines in full reverse and, following the instructions, tried to get the houseboat off the beach. It did not budge. We then tried turning the thrust full to one side and then full to the other. Not a glimmer of movement. It seemed firmly stuck. As Dana and I were frantically trying to figure out how to solve this problem, another strange incident occurred, one to which, in the heat of the moment, I did not pay enough attention. While still on board I happened to look down one side of the houseboat, and noticed a snake in the water. It was hopelessly trying to climb up the side of the pontoon. When I drew the attention of the others to the snake and then quickly moved back to the task of getting the boat off the beach, I failed to absorb how upset Kathy was by the snake and its efforts to climb on board. She and Doreen did try to tell me it was a rattlesnake and they vainly attempted to hit it with a spade while hanging over the side. I was so intent on the effort to float the boat that I paid little attention. And when I climbed down to the beach to begin pushing, it seemed to have disappeared - at least for the present.

After trying repeatedly for about 30 minutes to float the boat, we recognized that we needed help. A group who had been water skiing happened by in their powerboat and were kind enough to come on shore to help. We tried pushing and then digging away the sand alongside the stuck pontoon, all to no avail. Our helpers then had to leave but gamely said they would return shortly with other members of their party. After they left I called Wahweap Boat Rentals on the ship-to-shore radio ("*Calling Wahweap Boat Rentals this is houseboat 91...* ") and requested assistance. But soon our helpers were back though with only one or two additional people ("*the teenagers had gone to the marina*"). Nevertheless we were going to try again. Then someone had the bright idea of removing the steel gang plank and using it as a lever at the bow of the stuck pontoon. With a great deal of effort this began to move the boat and soon we

finally had it afloat. Once it was well afloat, Dana edged it back toward the shore some distance down the beach where the slope was greater. Our family climbed (or was hoisted) aboard, Dana handed out beer and sodas to our good samaritans and we were finally on our way. I started the powerboat and followed the houseboat out to deep water where we set up the tow.

So it was that, after a two hour delay, we were under way. It was a beautiful sunny day without a cloud in the sky and, mercifully, no wind. We motored serenely back to the main channel and turned upstream. The next couple of hours brought into view one marvelous vista after another. We passed Padre Butte and Gregory Butte and turned right through the narrow passage by Wild Horse Bar. Here the lake is contained in narrower and more dramatic canyons. Each side canyon we passed seemed more inviting than the last and we reeled off the names as we went, Wetherill Canyon, Mountain Sheep Canyon, Dangling Rope Canyon (with a marina entirely supplied from the lake). We were bound for Cathedral Canyon but its opening was so inconspicuous that we missed it the first time and only turned around when we passed buoy number 48. When we got back to what had to be the entrance, it looked so limited that I got in the powerboat and went in to take a look before attempting to enter with the houseboat. Though narrow in places the channel was plenty deep. I must have gone a couple of miles up into Cathedral - a truly spectacular gorge with towering red walls. There were only a handful of small spots where one could land (let alone moor) but I was reassured to find at least two houseboats in tiny inlets deep inside the canyon. I had my eye on one possible mooring place only a short way into the canyon and returned to tell the family about it, though with some doubt as to whether they would like this isolated place. Dana guided the houseboat into Cathedral while I went ashore to guide her in. Unlike the previous day, we came into shore very slowly and moored by placing the anchors behind large rocks. It was an ideal spot and everyone loved it. Next to the boat was a sloping rock "beach", a great place to swim. We all enjoyed a relaxing afternoon swimming and chatting. Only the occasional speedboat would zoom by disturbing us with the waves of its wake. Soon it was time for gin and tonics followed by dinner. We all slept well through a gentle windless night.

Dawn sidled gently into this beautiful cathedral whose red and ocher walls were reflected again in the mirror-flat waters. It was hard to imagine a more glorious place and I gave thanks that I could share such a special place with all those I loved. We stirred lazily, enjoying the place, the moment and ourselves. Quinn, always the first to rise, joined us on the fore deck and chatted amiably. Gradually the houseboat filled with the buzz of whole family and we were ready for breakfast and for a day of exploration.

We decided to leave the houseboat where it was and explore the surrounding canyons using the powerboat. So, after our leisurely morning start, everyone was outfitted with a life-jacket and installed in the powerboat. First we drove back into Cathedral Canyon, a fantastic narrow channel between towering, angular cliffs. Then we turned around and went back out of Cathedral Canyon into the main channel where we turned upstream, heading for Forbidding Canyon and the Rainbow Bridge National Monument just a short distance upstream. This

was easy to find and we entered another spectacular canyon. On the way in the boat traffic was modest. We followed the signs where the canyon forked and arrived at the courtesy dock installed in the canyon by the Park Service. Only a few other boats were there so it was easy to locate a place to tie up. Then we walked several hundred yards along the floating walkway to the beach and the start of the short trail to Rainbow Bridge. I was surprised by the size of this natural wonder - much more impressive than I expected. We hiked to the end of the trail that stops short of the bridge itself out of respect for the native Americans who regard the site as sacred. The bridge is indeed impressive and a ranger gave a brief talk with all the details. By the time we walked back to the boat, the place was crowded with people from several tour boats and lots of small powerboats, even one houseboat like ours. So as we headed back down the canyon there were boats going both ways, usually too fast. The waves kicked up by all this traffic between the vertical walls of the canyon made for a rough ride. I was glad that we did not happen to meet a large tour boat going the other way in one of the narrow sections. Out in the main channel, the water was smoother and we quickly made our way back to the serenity of our houseboat in Cathedral Canyon. It was time for lunch and a swim. For the first time the kids ventured onto the slide from the roof of the houseboat. It was Troy who plucked up the courage to go first.

We had underestimated the family consumption of Gatorade and since the Dangling Rope Marina was only about 25 minutes away, I decided on a Gatorade supply trip in the powerboat. The trip was uneventful. I had no trouble locating Dangling Rope Canyon and the marina hidden a short distance into it where I tied up without difficulty. Dangling Rope Marina has no land connection - it is supplied entirely from the water. As well as a gas station it has a small store, a snack bar and a ranger station. I brought back gallons of Gatorade.

Later in the afternoon we decided to explore more canyons in the powerboat and to stay a second night in the lovely spot in Cathedral Canyon. So Dana, Kathy, the kids and I set off for some nearby canyons. First, we found the entrance to Cascade Canyon just a mile or so upstream from the mouth of Cathedral, though on the other side. Some distance inside this narrowed to a deep channel between vertical walls about 15ft apart - no room to even turn the boat - another boat ahead of us was allowing the wind to carry them further up this long channel and we did the same, until, eventually the other boat said it could go no further. Unfortunately we could not see the end they perceived. We devised our own method of retreat. With the outboard in reverse and Dana and Kathy each at a rear corner fending off the cliff with their feet we slowly backed up and out to broader waters. Next we explored Driftwood Canyon just downstream from Cascade. We were able to penetrate further into Driftwood, taking the left fork at a major junction. This, too, narrowed but we decided to turn around before it got too narrow. At this point the kids were tired and we headed back to the houseboat for dinner.

The adults were sitting around the foredeck while Dana and Kathy prepared dinner. The kids were playing all over the boat including the aft deck where, throughout the trip, we had piled all the suitcases and backpacks. Suddenly

Gavin came rushing through the cabin to announce there was a rattlesnake on the aft deck. Each of us almost simultaneously recognized that the impossible had happened. That snake in the lake back in Gunsight Bay had somehow managed to slither aboard and had been an unseen passenger for a day and a half. Someone put the spade in my hand as I rushed forward to confront the situation. Dana came behind me with the broom. Fortunately all the other children had made a quick retreat from the aft deck where Gavin had heard the snake rattle. With remarkable perception and alacrity he had described exactly where the snake was hidden between a suitcase and the sliding glass cabin door (he was but inches from entering the cabin!). I spotted him instantly and lifted the suitcase away. He then retreated behind a second suitcase and I also removed that. He was now in an open corner with no further possible retreat. He coiled ready to strike though I was well out of his range. It was no contest. I sliced his head in half with one strike of the spade. He died instantly. Later there would be some thoughts of regret but at that moment the need for decisive action was overwhelming. Dana brushed the inert remains onto the spade blade and I flung them onto the rocks along the shore. We all retreated to the front patio to collect ourselves and to seek reassurance. Gavin had acted with decisiveness and uncommon good sense. We praised him deservedly and I promised to get him the rattle in the morning. Only slowly did the adrenalin subside. We helped ourselves to an extra gin and tonic and ate dinner wondering how barbecued rattlesnake would taste. After that it was a gentle and quiet night.

We awoke with the dawn for we had to make an early start to get back to Wahweap before the 2pm deadline. But before getting underway, I found my camping knife and made my way along the shore to where the snake remains had been thrown. Unfortunately a raven must have been there before me. Parts of the snake were already gone, including the tail. I was sad that Gavin would not get his rattle. But I promised him one that I had at home; it was the best I could do.

This time we had no trouble getting started. Dana had learned how to start the houseboat engines without difficulty and we backed out of our mooring without trouble. We tied the powerboat alongside until we got out of Cathedral Canyon and then set it on the tow rope well behind the houseboat. There was little other traffic in the main channel this early in the morning so we made excellent and easy time averaging about 10mph on the way back to Wahweap.

We were nervous about maneuvering the house boat around in the busy waters around the Wahweap Marina. I called Wahweap Boat Rentals over the ship to shore radio, asking for the check in procedure. We were informed that we should get both boats filled with gas before bringing them into T-dock to unload. Outside the breakwater we detached the powerboat and I drove it in separately. Dana did an excellent job of docking the houseboat at the gas station. The gas station attendant did the rest. As he went about his business we told him of our adventures. He had never before heard of a snake getting on board a houseboat. After gassing up, Dana maneuvered the houseboat back to the loading (or unloading) dock while I took the powerboat back to the main dock. We had returned without incident and in shorter time than we expected;

we unloaded, checked out and were on the road shortly after noon.

It was the end of a great adventure. We had so little experience with boats that it had been a risk to plan such an adventurous holiday with four young grandchildren. There had been risks: some were perhaps foreseeable such as the difficulty unbeaching the houseboat. But the greatest danger had been entirely unseen and unthinkable. That snake carried lethal venom. Other risks were richly outweighed by the rewards, the spectacular scenery and the opportunity to enjoy it with those we loved. But the snake was different. Yet such outlandish chances can occur anywhere at anytime. One cannot allow such unknowables to rule one's life.

Chapter 32

ERRIGAL

“...But still I would recall the stations of the west, white sand, hard rock, light ascending like its definition over Rannafest and Errigal....”

From “The Stations of the West” by Seamus Heaney (1975).

Falcarragh. The name of this desolate little village in the extreme northwest corner of Ireland conjures up a host of haunting memories for me, memories of a bleak rain-streaked landscape, of ancient Celtic tragedies and of a strange and impoverished people. When I was young my father and mother, always adventurous people, would arrange to rent a cottage on the edge of one of the deep inlets along this convoluted coast. We would load up one of our two cars with every possible kitchen and bedroom need and set off west from our home in Derry for the wilds of County Donegal. In those days there were many formalities to follow at the international border just west of the city of Derry. Thereafter, as the landscape bleakened and the roads became rough and narrow, we would travel beyond the reach of English hegemony into sparsely populated Donegal, “Dun na nGall” or the “Fort of the Foreigners” (the name derives from the fact that the Vikings founded the town of Donegal).

But, of course, there was a substantial intermediate zone in which English rule held some sway and the market towns relied for their prosperity on the economic giant to the east. Because of those commercial pressures, English had long ago supplanted Gaelic as the mother tongue. Only the extreme northwest corner of Donegal, the area around Falcarragh, Gweedore, Gortahork and including Tory Island, was isolated enough to avoid those pressures. There to this day, Gaelic is still the native language of about 30,000 inhabitants. The region is known as the “Gaeltacht” and its boundary represents a distinct border within Ireland. If you drive from Dunfanaghy to Falcarragh, you will pass a road sign, “An Gaeltacht”, marking the boundary of this area.

None of the holiday cottages were in the Gaeltacht for that would have been too strange, too foreign. The closest we came was a very rustic cottage near Dunfanaghy, a town remembered for its work house, one of those terrible places that were the only refuge for the starving and destitute created by the Great Famine in the 1840s. Indeed the famine hit the Gaeltacht particularly hard because the poverty of that region left little margin between subsistence and destitution. So at the height of the famine 600 starving and dying people were packed into the small work house buildings. Today the work house is a tourist attraction that tells the wrenching story of “Wee” Hannah Herrity. Born in Falcarragh about 1835, Hannah had to deal with an abusive stepmother after her mother died in childbirth during the famine. Escaping from that torment, Hannah wandered from place to place in northwest Donegal. Without any home she found temporary employment and shelter on several farms before illness gave her no alternative but the confines of the work house. Somehow she survived and spent many years roaming the roads as a beggar. Finally, late in life, her plight came to the attention of a Mrs. Law, wife of the local MP, who had a small cottage built for Hannah. The entire community rallied round to equip the one-room cottage with the essentials and provide Hannah with a moment of real joy. Hannah died in her cottage at the age of 90. The story presented in the tourist tableau is in Hannah’s own words, and it reaffirms one’s conviction that though the policy of the English Government toward the famine may have been understandable, it was unforgivable.

When we holidayed there it was a sparsely populated region and one of great natural beauty. Most of the population lived in a narrow coastal strip. The hinterland consisted of windswept heaths, lakes and dramatic rocky uplands. Towering over the Gaeltacht is the highest mountain in Donegal, a steep-sided quartzite cone called Errigal whose scree slopes rise dramatically above the heather-coated uplands just inland from Falcarragh. My father loved to explore this rugged landscape though I can recall the apprehension with which he crossed into the Gaeltacht. Once in Falcarragh he would find the little dirt road that led inland to skirt the slopes of Errigal. He would follow that a few miles to the tiny hamlet of Dunlewy on the shores of a lovely tree-lined lake. The valley beyond Dunlewy Lake presented a delightful panorama known as the Poisoned Glen, always a place of mystery, in part because of the name and in part because no road penetrated it. Many years later when I tried to find the origin of the name, I was not surprised to uncover a multitude of explanations. Perhaps the least attractive was the claim that the Glen was once home to a toxic plant, Irish Spurge Moss or “Euphorbia”, that exuded a poisonous sap and polluted the water of the glen. As evidence these reports point to the absence of birds and the resulting profusion of insect life during the summer months. A much more likely explanation is that the Irish word for poison, “neimhe”, is only one letter different from the word for heaven, “neamh”. It is said that the glen used to be called the “Heavenly Glen” by the local people and that the map maker (English of course!) screwed up. But the explanation favored by most people, tells the story of Balor, a king on Tory Island, and his beautiful daughter. So beautiful in fact that Balor felt compelled to imprison her in a tower so that she would



Left: Clouds shroud the peak of Errigal. Right: Ruined church overlooking Dunlewy Lake.

not come within sight of men. But the fame of her looks spread and men came from far and wide to attempt to see and woo the beautiful princess. Eventually, one gallant succeeded in capturing and spiriting her back to the mainland, up into the mountain fastness around Errigal. Balor followed the pair across the sea and up the valley into the Poisoned Glen. There he killed the captor with a giant stone that now stands at the entrance to the Glen. That stone is said to be the evil, or “poisoned” eye of Balor. Hence the Poisoned Glen.

At the end of the road at the entrance to the Poisoned Glen and just past Dunlewy village stand the mute ruins of a church. The walls of this haunting edifice are still complete. Indeed the white marble of which it was built was quarried just a few hundred yards away; the marble glows in the soft Irish light. Adding to the mystery, the adjacent graveyard contains a single gravestone. Unlike the Glen one can find few willing to offer explanations for the demise of this church. At one time it served as the local parish church and was thus part of the English establishment. Some may suggest that it was abandoned for the want of a congregation. Others will point to the new church built further down the valley after the old church became a ruin. Few will venture near the old church for it is said to be haunted. If it was burnt down in a fit of anger by a crazed survivor of the work house, many would know but none would tell. But it’s mute and haunting testimony is inescapable.

Perhaps it is not surprising that these hosts of memories keep drawing me back to this enchanted place. In previous years I had splashed my way up into the Poisoned Glen, hiking to its glacier-sculpted head. In the year 2002, I returned, this time for a symbolic pilgrimage to the summit of Errigal. I drove through Falcarragh early one Sunday morning when not a soul was stirring and found the now-paved road that leads up to Dunlewy. Errigal loomed on the left and Dunlewy Lake slipped by on the right as I approached the Poisoned Glen. The road now continues to climb past Dunlewy (the village is down a narrow side road) and past the entrance to the Glen, headed for a saddle that lies to the south of Errigal. I stopped short of the saddle at a small trailhead parking area (elevation 776ft) on the left side of the road about 4 miles from the N58/R251 intersection.

The route up the southeast ridge of Errigal is clearly evident from the trail-head and begins with a hike up through the boggy heather on the left side of a small stream. The going here is very wet and mushy. After about half a mile, you veer left and follow braided trails through the heather heading for the obvious rocky trail on the slope ahead. Once there, you transition to a steep rocky trail that follows the southeast ridge of the mountain. Views open up of Croloughan Lake across the other side of the valley saddle and of the Poisoned Glen off to the south among the Derryveagh mountains. Beyond the Derryveagh range is Glenveagh National Park, previously the domain of the English landlord John Adair who, in 1861, evicted 244 tenants and cleared the land so as not to mar the views on his estate.

As you move onto the apex of the southeast ridge, the landscape to the east and north also comes into view with Altan Lake far below between Errigal and the summit of Aghla More (1916ft). Muckish Mountain (2197ft), the site of an annual barefoot pilgrimage on St. Patrick's Day, is a little further away beyond Aghla More. As you near the summit of Errigal, you surmount a shoulder where there is a large rock shelter and a cairn. From there it is a short way up a narrowing ridge to the 2466ft summit of Errigal. In fact there are two sharp peaks on a narrow ridge 25yds apart, the trail between them being known as "One Man's Path". Provided you do not find yourself in the clouds (often the case), the panorama from the top is spectacular in all directions. Off to the north and northwest you can see the Atlantic Coast and fabled Tory Island. It takes only about 1hr 15min to reach the summit of Errigal and less than 1hr to descend again.

If only it were that easy to right those centuries of wrong, or even to put them behind us. Like that 1690ft hike to the top of Errigal, it seems like a simple thing to do, to start afresh and build a vibrant economic future. To any experienced hiker 1690ft is almost trivial. Yet when I climbed Errigal a fierce cold wind was howling out of the east. I was barely able to put one foot in front of the other without losing my balance. The rain hammered into my clothes and face so fiercely, I could only with difficulty look up to see where I was going. I asked myself why in the name of God was I continuing in the face of this maelstrom. Yet when I came to that summit ridge, the wind was miraculously gone and the beauty of the world around me vindicated all my efforts. I could not help wondering whether Hannah felt that way about her cottage. As she said: "Deed aye, it's the heart that matters".

Chapter 33

SLEMISH

“.. the greatness of Patrick (St. Patrick) is beyond dispute: the first human being in the history of the world to speak out unequivocally against slavery.”

From “How the Irish saved civilization” by Thomas Cahill (1995).

A large fraction of my ancestors lived out their lives on the narrow strip of coastal land around the northeast corner of Ireland, along the coast of County Antrim. The Dicks and Dales, the McCloys and the Earls, peoples mostly of Scottish heritage, eked out a livelihood from the land and the sea, farming in one season and fishing in the next. Undoubtedly there was also a little smuggling and some illicit distilling. The only viable means for traveling any distance was by sea and so their lines of communication and commerce were along the coast and across the Irish sea to Scotland rather than overland to the interior of Ireland. This was especially the case along the Antrim coast for just inland from the coastal strip rose a substantial escarpment edged by basalt cliffs and topped with bleak and forbidding moor land. Of course, as the rich coastal land became crowded, the poorer families would be forced up onto these moors or at least to the parts where the drainage was sufficient to allow some meager farming. Huddled in their stone cottages, constantly buffeted by the wind and the rain, these hardy people would have lived quite isolated lives, answerable to no-one beyond their own tightly knit community.

Rising dramatically out of this moor land plateau are the eroded remains of a prehistoric volcano, a plug of basalt with steep sides and a flat, rounded top. Known by its ancient Celtic name, Slemish, the 1437ft high mountain can be seen from thirty miles away on a clear day, though one must admit there are few such days in this misty land. Instantly recognizable by its prominence and unusual shape, it was the focus of local myths and legends far back into prehistoric time. But it acquired a very special place in Irish folklore and history during the days of St. Patrick.



Left: Slemish from afar. Right: Slemish and the road to the trailhead.

Born in Britain about 385AD, Patricius or Patrick was one of the last generations of Britons with Roman heritage. His father, Calpornius, is believed to have been a churchman. At the age of sixteen Patrick was kidnapped by Irish raiders, carried back to Ireland and sold as a slave to a chieftain called Miliucc. He was put to work as a shepherd tending sheep on Slemish mountain. During his six years as a slave he underwent profound spiritual development, in which prayers on the mountain top became a major part of his life. After six years, he escaped and traveled by boat to France before returning to his family in Britain. There he had a dream in which he believed he heard the Irish calling for him to return, a call that he interpreted as coming from God. To prepare for this calling, Patrick traveled to Auxerre in France where he studied with Germanus and was ordained as a deacon. Finally, in 432 he was consecrated a bishop and began his world-changing mission. During his years in Ireland as a traveling apostle he effected a remarkable religious conversion among the Irish people, an achievement that continues to be recognized and celebrated down to the present day. The germination of that great movement was Patrick's epiphany and, in the Irish tradition, that transformation is closely connected with Slemish mountain. So it is that today, on every St. Patrick's Day, every March 17th, a religious service is held on the summit of Slemish to commemorate his life and work.

Patrick's writings, his "Confessions" and "Letters to Coroticus", continue to be the focus of detailed study and interpretation. Once seen as the works of a barely literate rustic, more recent scholarly evaluations consider them a powerful manifestation of his commitment and spiritual depth. Moreover, in some respects Patrick was more than a millennium ahead of his time, especially in his condemnation of slavery. Thomas Cahill writes that "... the greatness of Patrick (St. Patrick) is beyond dispute: the first human being in the history of the world to speak out unequivocally against slavery." A powerful legacy indeed.

In my youthful travels through County Antrim, I would often, on a clear day, glance across the rolling hills at the profile of Slemish and think idly of climbing to the summit. My inspiration was in part its prominence and in part its legend; but this was never quite enough to produce any action. However,

after the death of my own son Patrick in a terrible automobile accident, the life and legends of St. Patrick took on a new relevance and meaning for me. Thus it was that I resolved to climb to the summit of Slemish at some point during a visit to my homeland.

One day in August 2002, when Doreen and I were exploring the coast of County Antrim, we had both the time and the opportunity to satisfy this whim. From the coastal village of Glenarm we drove up through one of the most beautiful of the renowned Glens of Antrim, past South Munie where my McCloy ancestors farmed, and onto the bleak moor land on top of the escarpment. Heading west the narrow mountain roads gradually took us down to drumlin-rolling hills dotted with tiny farms and a patchwork of small fields. We soon discerned the unmistakable shape of Slemish. But it took some rather intuitive navigation to negotiate the maze of small roads around the north side of Slemish and some trial and error before we located the route to the trailhead on the west side of the mountain. We later recognized that the approach from the west, starting in the town of Broughshane, would have been much easier; it is even signposted.

As well as a large stone shelter and restrooms, the trailhead (elevation 810ft) includes information on St. Patrick, on the geology and on the trails to the top. The summit trail heads directly up a modest slope to the base of a steep incline with many braided trails. On a rainy day such as I encountered, this steep incline needs care for the rock and the mud provide for uncertain steps. But it is still a very short climb and soon one is clambering over less steep but grassy banks toward the flat 1437ft summit. The climb takes about 35 minutes. On a clear day it is said that the panoramic view from the top of Slemish is inspiring. Some say that they have been able to see the tops of the Glens of Antrim, even the mountains of Scotland about 30 miles away. And to the west, the distant Sperrin Mountains in County Derry may reportedly be visible. More realistically one can look down from the summit and see the circular fields that date from the time of St. Patrick or before. Then the woods would have been cleared by hand. The fields may even have belonged to the chief Miliucc, Patrick's owner. A modern cottage stands on the site of Miliucc's stronghold; ironically this cottage is available for rent by visitors.

But I could see none of this for the mist allowed only a few yards of sight. Around me lay the flat earth and summit rock where St. Patrick spent years in prayer and thought. In the ancient tradition of the Irish the rock was covered by coins jammed in every crevice, balanced on every flat surface. I took a Lincoln penny from my pocket and placed it with all the others for my Patrick had been the essence of an American boy. The rain dripped down the hood of my weatherproof jacket, masking the tears that fell for my beloved son. Time does not heal all wounds; there are some that one lives with for all time.

But Doreen was waiting for me back at the trailhead and I reflected, as I often do on such occasions, that the part of our son that was most alive was our precious family memory of him. So it was that I sighed and turned to leave, intent on departing the darkness of the summit and resolved to hasten to that person and that place where I could find comfort and the echo of my Patrick. I

hurried down the grassy slope and the steep incline, even jogged across the field just above the trailhead. Doreen had been watching for me to emerge from the mist, concerned about both my physical and emotional well-being. We hugged and hastened into the warmth of the car. Soon we were speeding across the moor land toward a family welcome.

I could not tell you what I accomplished that afternoon; but there seemed some rightness to the moment. Perhaps it was that I had brought the memory of my son back to the home of his ancestors and to the place of his namesake. Perhaps, on the other hand, I was just being self-indulgent. I am not sure that it matters whether or not I can distinguish between the two for I shall for ever be slave to both.

Chapter 34

ICEBOX

“Great perils have this beauty, that they bring to light the fraternity of strangers.”

From “Saint Denis”, Les Misérables by Victor Hugo (1862).

One of the pleasures that remains long after an epic physical ordeal has passed is the sense of comradeship of a challenge jointly met and safely conquered. There is something in the rawness of the experience that strips away pretensions leaving a compassion that is revealed, shared and deeply valued. It is as though the trust necessary for joint survival generates lasting momentum that, once created, endures into lifelong friendship. So it was in Icebox, in the dark, in the cold, in the deep wet pools that sucked out the last ounces of our strength and our body heat, one dark night in December 2002.

That December morning had dawned crisp and beautiful, not a cloud in the sky. The red and ocher cliffs and canyons of the Red Rock National Conservation Area glinted in the rising sun, their deep rifts holding promise of awesome vertical adventures yet to come. Just 20 miles west of Las Vegas, Nevada, and within sight of that neon fantasia, the Red Rocks are a spectacular and convoluted maze of interlocking canyons and sandstone bluffs, a wonderland that is surprisingly little known outside of a group of local hikers and climbers.

We were three strangers. Myself an aging warrior of many outdoor adventures, trying hard to experience all I could in the few active years remaining to me. Dick Shear, a former Los Angeles County Deputy Sheriff and company executive striving to find a larger place in his life for adventure and the outdoors. And Randi Poer, mother of three, finding a few moments of solitude away from all that responsibility, moments to enjoy the wilderness and rekindle the spirit. Somehow, circumstances had brought these three strangers together on this December morning.

We were part of a much larger group that had gathered for a weekend of exploring in the Red Rocks area. Several hikes had been planned for both days.

After two moderate adventures on the Saturday, the evening discussion around the campfire focused on whether or not anyone wanted to face the much greater challenges of Icebox Canyon and the huge wet rappel descent near the bottom that involved at least one swim. Icebox had been listed in the agenda but the stories of a previous descent in which Dick Shear participated had frightened off almost all the other hikers present. Ominously, a professional guide from Utah who had originally considered going, backed out with the comment that swimming in December was not his idea of fun. Only Randi and I spoke up when a head count was taken. As always, I was spurred on by the stories, driven by the thought that I might never have the chance again, that every opportunity had to be grasped and relished whether or not the circumstances were ideal. Randi seemed driven by the same ghost though she would have many more years than I to return to the Red Rocks. As one of the organizers, I think Dick felt some obligation to accommodate our wishes, though I sensed a little reluctance on his part. Perhaps, in the back of his mind, he suspected that he was setting in motion the wheels of an epic adventure.

We were very fortunate that my friend Troy Sette had volunteered to drive us to the trailhead early the next morning, a considerable undertaking for the rough 4WD road from the Scenic Loop in the Red Rocks National Conservation Area to Red Rock Summit involved five miles of rock-rutted driving and more than 2000ft of elevation gain. Once there, we paused at Red Rock Summit (elevation 6450ft) for a last equipment check and the statutory photograph. It shows three strangers each standing a respectful distance from one another, each hunched up against the morning chill. Then we were off, puffing up the trail toward the high ridge above us, loaded down with huge lengths of rope. So loaded that it took us almost an hour to climb the 670ft through sparse juniper forest to the ridge-top. The crest (elevation 7120ft) arrived abruptly and we found ourselves standing on the edge of a great escarpment. Below us the sandstone was sliced through by a spectacular maze of dramatic red and white canyons, a vertical world of stark and sheer slickrock with huge drop-offs in every direction. Rising above these, its white rock striking in the morning sun, was the great block of Bridge Mountain, another marvelous hike in this wonderland of rock.

Veering north along the ridge for about a quarter of a mile, we came to a promontory with a spectacular overlook of the great slickrock bowl at the head of Icebox Canyon. Beginning about 400ft below us, the Icebox bowl funneled down into a deep canyon leading, eventually, to the desert about a mile and a half away. Our spirits lifted by this awesome prospect and warmed by the sun reflecting off the slickrock, we descended an easy earth slope through small juniper trees heading directly for the bare slickrock on the right side of the bowl. In a few minutes we were standing on the edge looking down into the great bowl, plotting the course of our descent down to where it funneled into the canyon far below us. We would have to choose our course carefully to ensure there were tree anchors where we needed them and, as far as possible, avoid the sheets of ice that coated the bowl in places. Then we edged over the rim, downclimbing the steep cliff over broken rock and ledges, heading for patches of trees and then

descending by two rappels of 100ft and 130ft to a broad ledge with an awesome view down into the upper part of Icebox Canyon. Contouring left we reached the stream course and the base of the bowl, some 500ft below the rim, after 3hr 45min of hiking.

This short traverse brought us to the start of a section of downclimbing in which several detours into the brush on the left of the gully were necessary. Then we climbed down into a bedrock channel where, at an elevation of 6300ft, there were two rappels in the streambed, a 60ft drop from a boulder anchor on the right side and then a short 20ft descent from a webbing anchor under a large chockstone in the center of the channel. More downclimbing in a steep canyon stream course followed, before we came to the first of two class 4 downclimbs, a tricky 30ft descent on the left side of the canyon followed shortly thereafter by a similar 35ft downclimb also on the left. This is where Randi showed her climbing ability; together she and I manhandled the heavy rope-filled backpacks down these steep downclimbs. And just a little later at an elevation of 5590ft we arrived at a 50ft drop into a large round pool about knee-deep. Anchored by a large tree on a shelf to the right, we rappeled down onto a ledge about 2ft above the water. From there Randi found a way to avoid wading in the water by climbing along small ledges on the right side of the pool.

This is a beautiful section of the canyon where the stream wanders down lovely sculpted and scoured sandstone bedrock. Though still huge and vertical, scattered pine trees prospering in cracks in the slickrock soften the landscape and provide shade and shelter. But the canyon continues to narrow, and, after more downclimbing, we arrived at 5400ft and 7hr 40min from the start at a 20ft rappel around a large canyon blocking chockstone with much overhang.

We were now approaching the major physical challenge in Icebox Canyon, a huge vertical rappel preceded by a pool that had to be swum. Before that, at 4990ft and 8.5hrs into the hike, we came to a 40ft two stage waterfall, a small but deep hanging pool about 10ft below the lip followed by a 30ft drop into a waist-deep pool. The short winter daylight was now fading quickly and we decided to pause and take time to prepare ourselves as best as possible for the challenges ahead. Dick had a drysuit; Randi and I had wetsuits though mine was only a "shortie" and I supplemented it with rain gear that I duct-taped to my ankles, wrists and waist. Dick had also loaned me a pair of neoprene gloves. Thus attired and helmeted with headlamps attached we descended the two-stage waterfall using a tree high on the left as the rappel anchor. I was the first to get wet in the waist-deep pool at the bottom and my feet were already beginning to get very cold before we resumed our hike down the canyon. It was just a short step to the first place where swimming was necessary; a 10ft slot that we chimneyed before a 10yd swim.

Just below this we finally arrived (at 4920ft, 9hrs and 2.3 miles from the morning start) at the top of the grand challenge, first recognized by the large dead tree propped up against the right-hand wall of the canyon about 30ft from the top of the descent. This tree provided a solid anchor for the rappel; to an existing webbing wrap that stretched to a quicklink at the edge of the drop, we added a backup length of webbing. From Dick's previous descent we knew



Left: View down into Icebox Bowl. Right: Upper Icebox Canyon.



Left: The big rappel. Right: Below the big rappel.

that at least 200ft of rope would be needed to reach the bottom. We had two ropes, a huge 340ft length and a 240ft piece; we set up a single strand rappel with the longer rope and deployed the shorter one as a recovery line. I had volunteered to go first; Dick would go down last, his duty being to manage any emergencies that might arise. Without further delay (for I was getting colder by the minute), I rappelled down a steep 15ft slot into the deep pool and, still on rappel, vigorously swam 10yds across the pool to the smooth lip at the far end. The lip was broad enough to allow me to stand safely and I quickly fed the main and recovery ropes over the edge and down into the abyss. Below I could see nothing but pitch-black emptiness. I slipped over the edge (using my famous slide entry to a rappel) and began the vertical descent. There is always a

moment of apprehension at the top of a rappel before you get into a comfortable rhythm of descent. Fortunately this came quickly, and after about 30ft I began the long free rappel down across the face of a huge cave (the "Icebox") where the sandstone is massively undercut. It was an out-of-body experience, floating in the air surrounded by pitch-black darkness, my headlamp only dimly capable of detecting the great sandstone walls far beyond my reach while the trickling water of the stream drenched me from above. It seemed ages before I came to land on some steep and wet rock steps just above a large deep pool. Here I had assumed I would come to the end of the rappel. But in the darkness and cold, I could see no way to bypass the pool, no alternative but to swim yet again. With some consternation I thrashed my way across the 10yd pool only to peer down another 10ft drop into yet another pool. At this point the cold had begun to seriously affect my strength and agility but there was only one way to go. I half-waded, half-swam the second pool only to find myself at the top of yet another 50ft drop that ended in a third pool. On rappel again and at the end of my strength, I slid my way down the 50ft drop and waded across the pool to a beach. Only 5 extra feet of rappel rope trailed in the last pool; there was no sign of the recovery rope.

I knew that I had to get the wet clothing off as soon as possible. I had to find some way to warm up before hypothermia set in; my feet were particularly painful and I regretted not making an effort to borrow a pair of neoprene booties. Even though the gloves had kept my hands quite functional, it was particularly difficult to find and grasp the ends of the duct-tape, so as to remove the rain gear. Eventually and with much trembling I managed to undress, to don a dry tee shirt, a pair of long johns and a fleece jacket and to begin to warm my core. Now, I turned my attention to communications; a long whistle blast signaled the top for Randi to begin her descent. Then I forced myself to put my shoes back on for I knew that was the only way my feet would warm. Stomping around also helped.

I confess, I was so intent on my own predicament, that I was only dimly aware of the spot of light high overhead as it slowly descended. I think I yelled directions and encouragement at Randi, but I am not sure. Soon she was down and we both communicated with Dick over the radio. Randi also hastened to change into warm clothes but both of us were in no fit state to mount any rescue should Dick need help. We decided to light a small fire. Randi found some kindling and small logs and I soon had a very welcome fire burning. Overhead Dick's light seemed very dim as he rappeled through space. When he reached the bottom of the free-rappel, he tried heroically to adjust the ropes so as to allow rope recovery when he got to the bottom. But the total rope length was inadequate and it took some time before we realized that there was no alternative but for Dick to descend without any hope of rope recovery. We would have to leave them behind and hope to recover them at a later date. Then, as Dick began his transit through the lower pools his light died completely. Struggling mightily in the wet and cold, it took an age for him to remove the batteries from his radio and, using only feel, to install them in his light. I still do not know how he managed it. Finally, we all breathed a great sigh of relief as he

made it down safely and we could begin preparations for the hike out. By this time, warmed by the fire, Randi and I had recovered substantially and we were able to help Dick get changed and packed.

As we started on our way down the canyon, it was a great relief to finally be moving again. Almost immediately, however, we were unexpectedly faced with a small steep slot and a deep pool; fortunately, Randi found a way around this by way of a high shelf on the right. Though some further route finding was needed to negotiate other pools and boulders in the canyon, the trail gradually became easier to follow and the trek to the trailhead became uneventful. It was now approaching 10.00pm, our travails at the big rappel having consumed several hours. Our minds naturally turned to the next challenge, the reception we would receive from all those who would be waiting anxiously, perhaps fearfully, for some news of our circumstances. We finally reached the Icebox Trailhead (elevation 4300ft) after 14hrs on the trail; in that time we had covered but 3.6 miles of this wild land.

It was the next weekend before Dick and I hiked back up Icebox Canyon from the trailhead, carrying additional rope with which to complete the rope recovery. In daylight it was clear that there was a downclimbing route that bypassed the pools below the free-rappel but it would have been almost impossible to find it in the dark unless one were familiar with the territory. We had little difficulty with the rope recovery and were able, while we were there, to clear up the remains of the fire that had been so important to us the previous weekend.

Despite the pain of the cold, it had been a wondrous adventure in a spectacular place. I shall always remember descending into that pitch-dark abyss with my headlamp bouncing patches of dim light off distant slickrock. But, most of all, I will remember the quiet competence of my two companions and the teamwork that allowed us to overcome very adverse physical conditions without risk or trauma. In the cold, in the wet and in the darkness, a special bond was formed between three strangers, a bond created by the shared ordeal and cemented by the trust that we now felt in each other's strengths. At the end we hugged and parted, each for the moment intent on pleading forgiveness from those who had waited anxiously for our appearance. But we knew we would come together again as treasured friends and, each time we did, we would talk of that fantastic adventure in the "Icebox".

Chapter 35

ON THE VOMIT COMET

*“Oh! I have slipped the surly bonds of earth
and danced the skies on laughter-silvered wings ... ”*

*From “High Flight” by John Gillespie Magee Jr. USAF pilot, killed
Dec. 1941, the month in which I was born.*

Maybe it all started when I was a small boy watching rivulets of sand sliding down the lee side of the dunes in Portstewart. I remember watching and wondering how one might ever understand such elegant yet simple movements. Many years later I studied the mechanics of fluids in college, even going on to earn a PhD in the subject. My thesis involved calculations of the shape and other features of fully developed cavity flows, that is to say the flow of a liquid around an object where the pressure in the wake falls below the vapor pressure and becomes a large vapor bubble attached to the object. But nowhere in all of these studies did I learn anything about the flow of sand!

Many years later when I was a young faculty member at the California Institute of Technology, a senior colleague approached me with an enlarged photograph. It showed the vertically-downward flow of sand around a cylinder. Below that cylinder where one would normally see a wake, was a void or cavity empty of sand. It looked for all the world just like the vapor-filled wakes I had studied for my PhD - and that was, of course, why my colleague had approached me. I became intrigued by that photograph and that fascination led to many interesting years of research into the flows of granular materials.

The pioneer of granular flow research had been a colonel in the British Army by the name of R.A.Bagnold. Colonel Bagnold spent a large part of the Second World War in the deserts of North Africa. Recognizing the need to improve the ability of vehicles to negotiate this wild and shifting terrain, Bagnold studied the dunes and their reaction to all kinds of vehicle traction. After the war he continued his research as a part-time faculty member in England. He built a rotating viscometer to measure the “viscosity” of flowing granular material

and the results he obtained were published in the Proceedings of the Royal Society. The paper contained not only his experimental measurements but also a qualitative theory that seemed to explain key features of the measurements. The paper became a classic, the first reference in almost all the papers published in the subject during the decades that followed.

Of course, in the years ahead there were other published measurements of the “rheology” of granular materials. Quite sophisticated theories were developed that supplemented and confirmed Bagnold’s theoretical constructs. Then in the late 1990s, Melany Hunt discovered that though Bagnold’s theories were valid, his experiments were flawed and did not support the conclusions he had drawn. In fact, the “rheology” he observed was caused by end effects in his device and not by the fundamental behavior of the granular suspension. Clearly the experiments would have to be repeated. Of course, in the interim other experiments had been performed. But a major problem with all such experiments is the complication caused by the difference in density between the particles and the fluid. This could only be overcome by eliminating gravity.

Thus it was that Melany and I (along with Jim Cory and Steve Hostler) designed and built an experiment to do these measurements in zero gravity in a research aircraft maintained by NASA specifically for zero-gravity experiments. Fundamentally a structurally-strengthened Boeing 707, this aircraft, called the KC135, climbs and dives so as to produce a period of zero gravity as it is going over the top, transitioning from the climb to the dive. The duration of this zero-gravity “parabola” is only about 25secs; it is preceded and followed by periods of 2g. The obvious potential consequences of such radical motions have earned the aircraft the nickname, the “vomit comet”. Each flight of the KC135 consists of about 40 parabolas one after the other and each research opportunity typically involves flights on four successive days.

Most of the experiments aboard the KC-135 are conducted by the students or other young people involved in the project. It is rare that the older team members volunteer for this service. But, for me it seemed the opportunity of a lifetime and the closest I would ever get to outer space. Indeed, from the beginning I was resolved to fly on the vomit comet. Because of their knowledge of my outdoor adventures, this was no great surprise to Melany Hunt and my other colleagues. But there were several substantial impediments to be overcome before I could realize this ambition. First I would have to pass a medical examination. If successful, I would then have to travel to the NASA Johnson Space Center for a day long, FAA-approved course that involved testing in their high altitude chamber. This went by the euphemistic label of “physiological training”. The medical examination presented a major hurdle for me since the FAA submission form clearly stated that a myocardial infarction was a disqualifying prior medical condition and I had suffered a mild heart attack about a year before these events. But it was worth a good shot and so I went to the medical examination armed with a strong letter from my cooperative cardiologist stating that I was in excellent physical shape and that he deemed there to be no reason that I should be disqualified because of my heart condition. The medical examination was conducted by a local, Pasadena eye doctor who was

most helpful and promised to do what he could to get NASA approval. Several weeks later the answer was positive and I was set for the second hurdle, the “physiological training” at NASA Johnson in Houston, Texas.

So it was that Jim Cory, Steve Hostler and I flew to Houston, Texas, in February, 2003, for our “physiological training”. By a bizarre and terrible coincidence, the Space Shuttle Columbia had tragically disintegrated on re-entry just a few days before our scheduled visit and a memorial service for the Columbia astronauts was planned for February 4, the very day of our scheduled training. Since all activity at the Johnson Space Center would cease during the memorial service (the President, cabinet members and other dignitaries would be in attendance), we expected that our training would be postponed. But that was not the case. Thus, as instructed, we showed up at NASA’s “Neutral Buoyancy Laboratory” at the Johnson Space Center early that morning.

The first phase of our “training” consisted of a full morning of lectures on the effects of altitude, hypoxia (lack of oxygen) and low pressure on the human body. We learned many things that we would not have anticipated. For example, the name of the maneuver one uses to clear one’s ears during pressurization by holding one’s nose, closing one’s mouth and forcing air into the cavity behind these blockages. It is called a “valsalva”. We also learned some of the unexpected disasters that can occur as a result of depressurization such as having a tooth explode because of a small air bubble trapped beneath a filling. During all of this we also completed a health questionnaire in which we had to list our current medications. These were collected and a doctor behind the scenes was going over them as we sat in the lectures. I listed my heart medications and, throughout the morning, was in some trepidation waiting for the doctor to call me out and disqualify me. But that call never came. Instead, several young people attending the course received their dismissals.

At this point you may well be wondering (as we did) why high altitude instruction was deemed necessary since the interior of the KC-135 is pressurized just like a normal commercial airliner. The stated reason was that we would not have ready access to the usual emergency oxygen system with which commercial airliners are equipped. Consequently we would have to learn to use the more complex systems that pilots universally use. But I think a second, unstated reason was a desire on NASA’s part to check us out in physically stressful circumstances in order to ascertain our ability to handle the environment of a KC135 flight.

Whatever the full complex of reasons, part of the morning was devoted to instruction in the use of the standard breathing apparatus used by pilots and, after lunch we were each fitted with a flight helmet and mask for the oxygen supply system. It was now time for the high altitude chamber test. The chamber is a large, steel pressure vessel containing a rectangular room measuring about 15 feet by 8 feet, with rows of seats down both sides and windows all around. At one end is a door that leads to a small antechamber about 4 feet by 8 feet with a door to the outside. Instructors sit at each end of the main chamber ready to give immediate aid to anyone in distress. The chamber operator and several medical personnel sit outside at one end viewing the interior through a large



Left: Being fitted for an oxygen mask. Right: In the high altitude test chamber. Photos by Jim Cory.



Left: Steve in the test chamber. Right: KC135 on the tarmac at Glenn. Photos by Jim Cory.

window. We all took our assigned places and plugged in our oxygen supply and our intercom systems. We then sat breathing pure oxygen for about 30 minutes to clear all the nitrogen from our blood. I was surprised by my initial difficulty in breathing with the mask on at zero altitude; one has to work to pull the gas in. But I soon adjusted.

Then it was time for altitude, the chamber was sealed and the pressure was lowered fairly rapidly as we “climbed” to 25000 feet. Before we got too high the man next to me had some serious ear problems and was removed to the antechamber for release back to ground level pressure. I was pleasantly surprised at my lack of any breathing or ear problems even when we reached 25000ft, that, incidentally, is not far short of the top of Everest. Once at that altitude, each of us in turn was required to take off our oxygen mask and breathe the rarefied air. The purpose was to allow each of us to recognize our individual symptoms of hypoxia. I went first and had few symptoms, only a slight dizziness similar to that I had experienced climbing high mountains. I lasted the full five minutes at which point I was instructed to put on my own oxygen mask which I did without difficulty. However I was so intent in looking for physical symptoms that I forget to start the little mental tests (join the dots, arithmetic) that they had given each of us prior to the “flight” and that we were supposed to complete

at altitude. Thus I did exhibit reduced mental faculties.

My young colleague, Steve Hostler, also had few difficulties but two or three of the other 10 “students” showed signs of distress and had to be helped to put on their masks early. Once we had all completed the hypoxia test, the chamber pressure was increased gradually back to sea-level, a process that was accompanied by much valsalva-ing. After a brief pause outside the chamber we proceeded to the second phase of the testing in which we entered the antechamber in pairs with one instructor. The antechamber was then suddenly depressurized to 15000 feet (by opening a valve to the de-pressurized main chamber). The antechamber filled with condensation mist and we were then to don our masks and begin oxygen breathing as expeditiously as possible. My confidence was increasing rapidly as I could see a successful end in sight and I had no difficulty with this second phase.

Thus we came to the end of the training and it was with considerable relief that I was among those who returned to the classroom for a final briefing and the presentation of certificates signifying our successful completion of our “physiological training”.

This special NASA airplane, the KC135 or “vomit comet”, performs the following maneuver to achieve 25secs of zero gravity. From level flight at about 26000ft and 510 knots (just about its maximum speed) it pulls up into a 45 degree inclination and, under full power, climbs to nearly 35000ft. There the pilot transitions into a parabolic trajectory during which the vehicle experiences the 25 seconds of zero gravity. The velocity at the top of this arc is only 325 knots, close to the stall speed of the aircraft. At the end of this maneuver, its trajectory is a 45 degree descent and its speed increases back to 510 knots when it pulls out again into level flight at 26000ft. The g level during pullout is typically 1.8g. During the course of a flight it completes this maneuver about 40 times thus producing 40 periods of zero gravity each of which are 25 seconds long. This test period lasts about an hour and a half.

Though the airplane is stationed at NASA Glenn just outside of Cleveland, Ohio, flights are conducted out of both NASA Glenn and the NASA Johnson Space Center in Houston, Texas. In order to perform its radical maneuvers and avoid other commercial and private aviation, the KC135 must seek permission to use restricted air space. When operating out of NASA Glenn in Cleveland it normally uses two such restricted air spaces. One is an east/west strip of space located over Lake Ontario and given the code name Misty. The other is over the thumb of Michigan and is known as Steelhead.

Our experiments were scheduled on a May 2003 test flight out of NASA Glenn and so the equipment was shipped there the preceding week. My arrival had been delayed so that Steve and Jim covered the first day alone. But I was there early on the morning of the second day in order to proceed with the pre-flight preliminaries. The first order of business was a visit to the medical office at Glenn for a final check-up. Yet again I was apprehensive that they would disqualify me. But the checkup was routine; I was merely asked whether there had been any change in my health since the previous medical examination and I could emphatically respond in the negative. Then I was issued the standard



Left: Waiting to board. Right: Floating in zero gravity. Photos by Jim Cory.



Left: Floating in zero gravity. Right: Colliding with the ceiling. Photos by Jim Cory.

dose of motion sickness medication, two Sudanyl (30mg each) and either one or two Scopalamine (0.4mg each) for each flight.

The next stop was the regular preflight briefing where we met the pilot and captain, Stephen Feaster, the flight director John Saniec, and the flight doctor Dwight Peake. Thus briefed we headed for the airplane just outside the NASA hanger. Most of the interior of the KC135's passenger cabin is empty of seats, all facilities and partitions. The floor, walls and ceiling, indeed almost all surfaces, are lined with padded mats and, in place of windows, there are fluorescent lights that provide a brightly lit interior. The experiments, seven on our flight, are bolted to the floor. Only at the rear end does the cabin resemble a regular passenger airplane; there some 30 seats are installed and this is where all of us sat for the takeoff and the 30 minute flight from Glenn to Misty. Once we reached the restricted air space we left our seats and positioned ourselves on the floor next to our experiments.

The moment was at hand for the KC135 to begin its unique maneuvers.

We had, of course, been thoroughly briefed on what to expect and were closely watched and supervised by the NASA crew stationed at regular intervals along the length of cabin while the doctor roamed up and down watching for any sign of distress. Nevertheless the experience and sensations associated with the plane's roller-coaster ride were initially hair-raising. We began with a steep climb. Within the cabin, lacking any view of the horizon, it felt as though the plane was level at all times and only the magnitude of gravity was changing. The first sensation was of increased gravity and all such periods were the most unpleasant part of the flight for the inner ear does not like increased gravity. It is wise to remain still, kneeling or sitting on the floor. If you move your head too quickly, nausea comes quickly. Moreover, it feels as though your blood is all draining down to your feet. Then, after just a brief period of increased gravity, the pilot, in a matter of a few seconds, transitions to zero g. Your blood comes rushing back up into your head producing a headrush. At the same time, your stomach is moving upward rapidly. The first few times you encounter this transition it is an alarming experience though after four or five parabolas, knowing what to expect and knowing that you are not headed through the ceiling, one becomes accustomed to it. By comparison, the 25 seconds of zero g, are truly delightful. Initially one is reluctant to let go of the handrail hardly believing the environment. But after a few parabolas you move as soon as zero g is reached. I usually headed first for the safety of the handrail along the side of the ceiling. Floating in zero g is much like being underwater except that the resistance to tumbling or spin is much less. Consequently you must be careful at take-off not to impart too much spin for you can rapidly find yourself tumbling or spinning out of control. But once the zero spin take-off is perfected you find yourself embarking on longer and longer flights across and along the cabin. However, you must be ready for the signal from the NASA staff indicating that the zero g period is coming to an end. Indeed the staff regard the transition out of zero g as the most dangerous moment when people might come crashing down from their weightless flight. Consequently they yell "coming out" and this is the signal to take your place on the floor and prepare for non-zero g. All of this becomes quite routine as one progresses through the 40 parabolas that are interspersed with turns when the aircraft comes to the end of the restricted air space. After the first few parabolas devoted to adjustment, we had to get down to the business of the experiment and worked hard for the next hour or so as we swooped up and down through the skies. After 40 parabolas we were quite exhausted and glad to return to our seats in the rear of the aircraft for the flight back to Glenn.

There was much work to be done after we landed in order to prepare the experiment for the flight on the next day. We were to repeated the whole agenda with different settings - and again the following day. But we had many difficulties with the experiment, troubles that now seem inevitable since it was not possible to predict how it would respond to a weightless environment and there was no way to test that ahead of time. Though we learned alot from those first flights, it only allowed us to redesign the experiment for a more successful flight in the future.

On the other hand, from a personal perspective it had been a truly unique experience. I had come as close to an adventure in space as I ever could or would. I was born just a few years too early and born into a society only just entering the technological age. A few years later and I would have learned of the real possibility of venturing beyond the bonds of gravity and exploring the majesty of space. But I do not dwell on such hypotheticals. I am content for I have lived a life full of love and full of adventure beyond the wildest dreams of my youth. And I have tasted what the frontier of space might be like.

Chapter 36

HAVASUPAI

*“Come dance with the westwind
and touch on the mountain tops,
Sail o’er the canyons
and up to the stars”*

*From “The Eagle and the Hawk” (1971), song by John Denver and
Mike Taylor.*

Up in the northwest corner of Arizona, far to the west of the popular rim venues of the Grand Canyon, lie several American Indian reservations where access is limited and the impact of the dominant white culture has been controlled with some success. One of these tribes, the 600-strong Havasupai live in a village called Supai that is far beyond the end of the road and deep within the bowels of the Grand Canyon. A visit there is not only a spectacular scenic experience but also a narrow window into a special and different culture. One weekend in March 2004, I hiked into this rugged land and among these unique people; this is the story of that adventure into time, space and the human experience.

On Sunday March 21, I turned off an old and legendary highway, the historic Route 66, at a point just east of Peach Springs in the emptiness of northwestern Arizona, and drove across the flat, open range of the Hualapai Indian Reservation toward the rim of the Grand Canyon. Indian State Secondary Road 18 crosses the Coconino Plateau; it is a lonely highway with no services, and almost no sign of human presence except for the occasional small herds of cattle. There is little to do for 62 miles but count the mile markers. Then over the last couple of miles the road begins to dip down into a shallow gully until, quite abruptly, the earth opens up ahead and you come to the edge of the upper rim of the greatest canyon on earth. The road contours around the top edge of the cliff for a short distance before arriving at a long, strung-out parking lot known as Hualapai Hilltop. This is the end of the road for all vehicles. The road you

have travelled is the only asphalt on the Havasupai Indian Reservation and has penetrated just a short distance into their territory. The rest of their domain is made up of wild and beautiful, often inaccessible, canyon country with cliffs, mesas and steep ravines. A few of the canyons are blessed with perennial spring water that brings the desert to life and feeds a rich bottom land where plants can grow and people can live. Far down below Hualapai Hilltop is one such eden, the village of Supai, home to most of the Havasupai tribe. The Grand Canyon country has been the land of the Havasupai people for hundreds of years, as long as their collective memories can recall. Their village of Supai lies at a bend in Havasu Canyon where the canyon broadens and the river has left a wide flood plain. In ancient times they lived here in the canyon bottom during the spring and summer, tending to their gardens and their flocks. In the fall and winter they would move up onto the plateau for hunting and gathering. When the US government created the Havasupai Indian Reservation in 1882, it confined the tribe to a tiny area around the village, denying them their range lands on the plateau. After many years this injustice was corrected in 1975 when Congress returned nearly two hundred thousand acres to the tribe forming the current Havasupai Indian Reservation.

Today tourists are also drawn to this land. The same healthy stream that emerges from the ground at Havasu Springs to give life to the Havasupai, also creates a series of magnificent waterfalls that attract visitors from all over the world. Rich in calcium carbonate, the river coats all that it touches with hard limestone. In the streambed this leads to travertine rock formations that create shelves and lips with crystal blue-green pools and cascades. Hence the name Havasupai, the "people of the blue-green waters." Most of these attractions lie below the village where the walls of Havasu Canyon close in and deepen before finally flowing into the Colorado River. But to get there the visitor must pass through Supai.

So it was that I loitered at Hualapai Hilltop, sorting my camping gear and chatting with returning hikers to glean information on the circumstances down below. During the popular spring season the Hilltop is a busy place. Several Havasupai-operated pack stations cater to both the tourists and the residents, carrying visitors and their baggage down to the lodge in the village and transporting goods to the villagers. In contrast, a rudimentary helicopter service also shuttles back and forth to the village, landing at the edge of the cliff only yards from the pack mules.

In the 1860s the adventurers who commandeered the high Coconino Plateau from the Havasupai and other tribes, created huge sparsely-vegetated ranches on which to run their cattle. Some families got rich off this land, among them the Babbitts, and with that hegemony came political clout. More than a century later that influence was still in place and one member of the family, Bruce Babbitt, became governor of Arizona and then Secretary of the Interior in the Clinton administration. In doing so he ironically gained supervision of the Bureau of Indian Affairs and therefore responsibility for the welfare of the Havasupai and their reservation deep in the great canyon. But Babbitt Ranches continued to own and operate huge tracts of land on the plateau; in particular they

continued as owners of Cataract Ranch that included the land at the head of Cataract Canyon. Cataract is a major tributary that flows into Havasu Canyon some 35 miles from the ranch house and just a short distance above the village of Supai.

The one precious resource needed for the cattle to thrive on the high plateau was water. Not that it did not rain. However, rain tended to come in torrential downpours and would quickly run off the rock and soak into the desert leaving little for drier times. The solution was to build dams to hold the water. In the early days there was virtually no regulation of these structures and ranchers built crude, unengineered berms to hold the water. Even after the dams came under the jurisdiction of the state of Arizona in 1973, there were so many of them in remote locations that oversight and evaluation lagged far behind. Cataract Dam was never examined even though the state law mandated inspection every five years. Moreover the structures tended to grow with time as ranchers sought to strengthen and expand their facilities. So it was with the Cataract Ranch. The Babbitt's dam started out life as a modest structure just a few feet tall. But by 1929, when the State of Arizona passed a law requiring that all dams be registered, James E. Babbitt complied stating that the dam was 15ft tall. By the time of the events recounted here, it had somehow grown to 20ft. While this additional 5ft difference does not seem like much, in fact, it implies more than a doubling of the stored volume of water.

Late in February 1993, torrential rains came to the Coconino Plateau. The runoff was compounded by a series of storms. A deluge of water gathered strength as it was funnelled down into Cataract Canyon and came raging into the makeshift dam, causing it to overflow and to begin to disintegrate. As the dam failed an enormous wall of water went crashing down Cataract Canyon toward the Havasupai village. Fortunately, someone had thought to warn the tribe who, as night fell, scurried to their refuges of higher ground in the nooks and crannies of the red sandstone walls surrounding the village. The tidal wave hit the village sometime after midnight. It carried away just about every structure the Havasupai owned, their entire centuries-old irrigation system, their cattle, fields, crops and orchards. It scoured their hallowed burial grounds scattering their ancestor's remains down the canyon. Even the beautiful waterfalls and blue-green pools were violated. The ancient travertine retaining walls that took so many years to deposit were sliced way in seconds leaving muddy sloughs where the blue-green pools had been. The destruction was total and cataclysmic. As the flood subsided and the Havasupai ventured down from their refuges they found only a sea of mud sprinkled with a few belongings and dead animals.

The tribe was accustomed to occasional floods but nothing like this had happened in their long tribal memory. However they knew there was no alternative but to go to work with their hand tools to rebuild the village. Of course they applied to the Bureau of Indian Affairs for disaster relief. The response from Babbitt's federal agency was truly underwhelming. It was two months before the BIA authorized \$823,000 for cleanup and repair of the tribe's damaged infrastructure and even then the money was not released until the angry intervention by Senator John McCain. Not only was the money nowhere



View from Havasupai Hilltop.

close to that needed to restore the infrastructure of Supai but the grant also stipulated that none of the funds could be used to generate improvements over preflood conditions. There was little hope of improving tourist facilities, and therefore boosting the tribes principal source of revenue. To this day (2004) the trail to the spectacular waterfalls remains in dangerous condition. Meanwhile, the federal government was eagerly helping Babbitt Ranches assess damage to Cataract Dam. The Department of Agriculture sent a seven-person team to to survey the area, create a contour map and compute capacity data for the reservoir behind the private dam. That assistance came while Bruce Babbitt was secretary of the Interior. Some of it came while he still held an ownership interest in the Cataract Ranch and, therefore, the dam itself. Six months after the flood Bruce Babbitt sold his interest in the Cataract Ranch; it is unclear how much responsibility he had for the actions of the Cataract Ranch leading up to the dam failure. It makes one wonder whether anyone in government, state or federal, cared about the poor Havasupai.

But I knew nothing of this as I started down the steep, arid switchbacks that descend the cliff below the Hualapai Hilltop. It was a lovely spring day, warm but not too warm, and I felt sure the 8 mile downhill hike to the village would pass quite easily. After dropping about 1000ft in just over a mile, the trail reaches the wash in Hualapai Canyon. For the rest of the way, the descent is gradual and the hiking in the gravel of the wash is easy going. The vertical, sculpted sandstone walls gradually increase in height and the frequent overhangs provide welcome shade from the midday sun. This is a barren world of rock with almost no vegetation except for the occasional tree sustained by a small spring. However, all this changes at the end of Hualapai Canyon where it flows into Havasu Canyon (whose upper reaches are known as Cataract Canyon). Just upstream of the confluence in Havasu Canyon, a gushing river emerges from the

ground at Havasu Springs. This river irrigates the canyon bottom and allows a profusion of desert plants and trees. Turning downstream beside the river, the trail from here on is in the welcome shade of willow, tamarisk and cottonwood trees, the verdant and riparian canyon bottom in marked contrast to the earlier trail setting. Just 1.5 miles from the confluence, I came to the outskirts of the Havasupai village.

The village of Supai is situated where Havasu Canyon briefly broadens and allows extensive farming. But the red walls of Supai Sandstone still tower over the village providing security and shelter, at least against some dangers. Two red sandstone columns that protrude above the western wall are called Wii'iglivá and are considered male and female figures that protect the Havasupai people. It is said that their demise would presage that of the tribe. The village may be unique in the United States, being isolated and therefore insulated from the outside world. There are no motor vehicles, no gasoline fumes, no asphalt roads and very little concrete. The pace of life is gentle and rural; horses and dogs are everywhere. The wooden homes are spread out over the available land, individual plots being defined by trees and barbed wire fences. There are two small stores, a school, a church, a post office and a health clinic. Off to one side is a lodge for tourists (usually booked up for months ahead). Tourism provides a large fraction of the tribal revenue. All visitors must check in at the tourist office in the center of the village, right next to the small field that serves as the helicopter landing pad. There all campers must pay for a visiting permit as well as camping fees that total about \$40 per person. I sat on a bench in the center of the village to get a sense of the place and to enjoy a ice lollipop. I had the impression of a proud people who have had some success in maintaining their culture and way of life by partially isolating themselves from the outside world. Family groups strolled by, returning from some errand or visit elsewhere in the village. I listened to their strange-sounding native tongue of which they are very proud; it was not transcribed to written form until about 1980. Men, women and children on horseback would saunter by; signs explicitly prohibited cantering or galloping near the village center. There did not seem to be the atmosphere of depression, alcoholism and domestic violence that I had sensed on other Indian reservations. The helicopter made frequent trips back and forth from the Hilltop, ferrying everything from tourists to bags of fertilizer. This despite the fact that the several fully loaded mule trains had passed me on the way down from the Hilltop. The juxtaposition of the noisy, bustling helicopter and the ageless, serene world of the Havasupai seemed jarring; I felt resentful of the noise, the imposition and the intrusion represented by the helicopter. Despite the convenience I wondered if the Havasupai did not also resent it.

It was late afternoon, long after the last helicopter flight, before I bestirred myself and headed out of town bound for the campground about 2 miles down-canyon. A short distance beyond the village, the canyon narrows and deepens and the river begins a series of steep drops that also create some of the loveliest waterfalls to be found anywhere in the world. From here on to the Colorado River, Havasu Canyon is beautiful, its red sandstone walls contrasting with the greenery in the canyon bottom and the blue-green waters of the iridescent river



Left: Havasu Falls. Right: Mooney Falls.

that flows through it. About 1.5 miles from the village I came to the first of these waterfalls. Navaho Falls are actually a series of cascades. You first spy these through the trees from the right side of the canyon when passing an unstable riverbank from the 1993 flood that still poses a real danger. To get a close look at Navaho Falls you must proceed a little further down canyon and then work your way back upstream along the riverbank. Just downstream of Navaho Falls, the trail crosses a footbridge to the left bank of the river and almost immediately arrives at the edge of the cliff above the spectacular Havasu Falls. This magnificent waterfall drops about 100ft into a crystal blue-green pool. It is a beautiful place that alone is worth the hike down from the hilltop. The trail descends steeply to the left of the falls and a branch winds its way down to the edge of the pool. Here a swim is more than welcome on a hot day.

The campground is just downstream of Havasu Falls and consists of many tree-shaded sites with tables stretched out along both sides of the river in a narrow part of the canyon with vertical walls on both sides. Many of the sites lie along the stream banks. However there is only one purified water faucet along the west wall of the canyon; though the river appears clean it is downstream of the village and is probably unsafe to drink. It took me less than 4hrs of net hiking time to reach the campground from Hualapai Hilltop, a distance of 10 miles. It had been a long hot day and I was pleased to lie down beside the stream and drift into early sleep to the sound of the gurgling water.

Eager to explore further downstream, I awoke with first light and leaving my pack at the campsite, started down the trail through the rest of the extended campground. Just beyond the last site, I came to a dramatic overlook beside the awesome Mooney Falls, some 200ft of free-falling water plunging into another blue-green pool. The cliffs on both sides span the entire canyon and allow no



Left: Descending beside Mooney Falls. Right: Beaver Falls.

easy descent. Herein lies a tale.

Some of the earliest Europeans to explore this canyon country were prospectors, driven by the lure of instant riches. In 1879 a group of miners filed claims in Cataract Canyon and began an exploration down into the lower reaches of this remote region. Among the prospectors was a man named Mooney, even more adventurous than his colleagues. Over several years, the group pushed further and further down Cataract/Havasupai canyon. But they were unable to get past one particular obstacle, a huge drop-off where the river plunged over a 200ft cliff in a narrow section of the canyon. Over the centuries the river had deposited vertical, travertine cliffs on both sides of these falls. One day during their 1882 expedition, Mooney set off determined to negotiate this hurdle. He borrowed a belt and a rope to aid in the downclimb. He also removed his boots which he left at the top of the drop-off. No one knows exactly what happened next but he fell during his descent and ended his days at the bottom of the cliff. None of his fellow miners was willing to follow him down. They could see his still body at the base of the cliff but there was little they could do. Mooney did not move and so they reluctantly concluded that he had died in the fall. One of the prospectors tossed the rope and his boots down beside the body, commenting that it was the only funeral they could give him.

When the miners returned the following year they found that Mooney's body, like everything else exposed to the river, had become encrusted with limestone. But his boots were no longer lying where they had been thrown. Then one of the miners, Young by name, noticed a Havasupai Indian wearing familiar footwear and persuaded the young man to show him the way to descend the cliffs. The route was extremely exposed, too dangerous for any of the miners to attempt the descent. However, they noticed a hole that, if widened to form a

tunnel, would allow a start for the descent. After considerable excavation over that year and the next, the miners created two short tunnels that bypassed the steepest part of the cliff and allowed them to reach the bottom. There they were finally able to give Mooney a decent funeral, burying him on a island in the big pool below the waterfall. Appropriately that waterfall was given Mooney's name and today is a major tourist magnet in Havasu Canyon.

The route cut by those miners more than a century ago continues to be used to this day though the installation of chains, bolts and ladders has added considerably to the safety of the adventure. The downclimb consists of several small tunnels and platforms chiseled out of the travertine rock with steps added to ease your way. The tunnels are followed by steep rock steps with chains and, finally, several wooden ladders. Though the climb is straightforward, extra care must be taken when you near the bottom for there the spray from the falls wets the rock. At the bottom there is a marvelous plunge pool and a great view of the falls. Mooney's burial island is not immediately obvious.

Down canyon from Mooney Falls the trail sees less used though it is still a beautiful canyon. The path wends its way along the left bank of the river between vertical, red walls. About 10min from Mooney Falls, you come to the first river crossing, where the wade is usually no more than thigh-deep. Just a few minutes later the trail crosses back to the left bank and then, just before Beaver Falls, it again crosses to the right side. Just downstream of this third crossing the canyon becomes quite narrow and, to follow the trail, I had to climb a short way up onto a bluff on the right side. On top of this rise there were several stone shelters in the cliff at ground level, whose purpose was unclear. Beaver Falls are below this bluff to the left. To get a good view of these smaller but very photogenic cascades I had to find a steep downclimbing route just downstream of the falls. I was much taken with these lovely falls. Smaller in height than the much-visited waterfalls further upstream, Beaver Falls are an intricate weave of cascades interspersed with pools and foliage. I lingered in this lovely setting before reluctantly deciding to start back up the trail. I might have continued another 4mi to the Colorado River at the Havasu Rapids. But my time was short for I had to get back to the Hilltop before nightfall.

From Beaver Falls it took me about two and a half hours to hike back up to the village. I arrived there in the heat of the day and, as I had done on the way down, I sat down to absorb the comings and goings in the village. It was a long way back up to the Hilltop and I was not particularly looking forward to that four hour, hot and dusty hike. As I sat under the shade of a big tree, the helicopter landed in the small grassy field, disgorged a group of tourists, loaded some mail and was soon airborne again, swooping up the canyon between the sandstone walls. It was then that a quite inappropriate thought crossed my mind. Maybe I could get a ride back up to the Hilltop and avoid that unpleasant hike. Within a few minutes this became a full-fledged plan and I looked about for anyone who might be the local representative of the helicopter company. All I could find was a young girl seated at a rusty desk beside the chain-link gate, the entrance to the helicopter field. She did not seem to speak much English. She did however run into a nearby house and fetch a young man

who asked me to sign a list on his clipboard and informed me that I should pay up top. Within minutes the helicopter was back, my backpack was loaded and I was strapped into the front seat beside the pilot. As we rose into the air over the village, the guilt I felt about contributing to this jarring intrusion into life of the Havasupai was swept from my mind. Exhilaration took over as we swooped up Havasu Canyon between the sandstone walls and seemed to barely clear the rim as we rose up over the surrounding plateau. Below me I could see groups of hikers trudging along the trail on their slow way to the Hilltop. It was a fantastic feeling of freedom, maneuvering eagle-like through this spectacular vertical terrain. Above us still was the upper cliff below the Hualapai Hilltop. As the pilot approached our destination, he seemed to fly directly at the cliff just below the rim only at the last moment rising above it and setting down on a small concrete pad. It was an exhilarating conclusion to a marvelous adventure and one that left me inextricable torn between the serenity of the village and waterfalls and the spine-tingling excitement of the helicopter ride. I still can not resolve that conflict in my soul.

Acknowledgment: In preparing this account, I gratefully acknowledge the information that was taken from Tom Chester's website (below) and from the February 1995 story by John Dougherty in the Phoenix New Times entitled "Village of the Dammed":

http://sd.znet.com/~schester/grand_canyon/index.html

<http://www.phoenixnewtimes.com/issues/1995-02-23/news4.html>

Chapter 37

INDIAN CANYON

“The grandeur of the scene was but softened by the haze that hung over the valley - light as gossamer - and by the clouds which partially dimmed the higher cliffs and mountains. This obscurity of vision but increased the awe with which I beheld it, and, as I looked, a peculiar exalted sensation seemed to fill my whole being, and I found my eyes in tears with emotion.”

From “Discovery of the Yosemite” by Lafayette Bunnell (1880).

The world now recognizes that Abraham Lincoln set an extraordinary precedent when he signed the bill in 1864 establishing Yosemite as the nation’s and the world’s first state park. Twenty six years later it became a National Park, and so was established the precedent for a great American invention. Yet the magnificence of this place was recognized before the white man ever set foot in this land of spectacular natural beauty. The Yosemite Indians who lived on the floor of the valley not only revered the awesome monuments around them but used them to protect themselves from those who would hurt them.

Not many years before Lincoln set his signature on that bill, a less enlightened government had sent its troops to eliminate the native inhabitants of Yosemite Valley. During the second military expedition against the Yosemite Indians in 1851, a force under Captain Boling camped in the valley for an extended period and, from there, they launched many sorties in search of the elusive Yosemite Indians. One of those sorties took them up Indian Canyon to the high tableland where they suspected that the remnants of Chief Tenaya’s band were hiding. The chief himself was a prisoner of Captain Boling’s troop and was required to go along on the sortie. In his “Discovery of the Yosemite” (1880) one of the participants, Lafayette Bunnell, describes how the wily old chief, who continually tried to mislead his captors, attempted to dissuade them from the Indian Canyon climb,

claiming that “the ravine was a bad one to ascend”. They also severely underestimated the height of the climb. Indeed, Captain Boling, who had been ill, was unable to make it all the way and Bunnell was delegated to lead a small group to the top. Bunnell does not describe the canyon as presenting any major obstacles other than “wet mossy rocks”. Elsewhere in his book, Bunnell expounds: “The ravine called Indian Canyon is less than a mile above Yosemite Fall; between the two is the rocky peak called the *Lost Arrow*, which, although not perpendicular, runs up boldly to a height of 3030 feet above the level of the Merced. The Indian name for the ravine ... was Le-Hamite, and the cliff extending into the valley from the east side of the canyon is known as the *Arrow-wood Rocks*. This grand wall extends almost at a right angle towards the east, and continues up the Ten-ie-ya Canyon, forming the base of the North Dome..”

It seems strange that just eighteen years later, in 1869, John Muir spent “My First Summer in the Sierra” in Yosemite. He used Indian Canyon as a way to get down into the valley from the high country to the north. On the first occasion he was motivated to meet Professor Butler and “I made my way through the gap discovered last evening, which proved to be Indian Canyon. There was no trail in it, and the rocks and brush were so rough that Carlo [his dog] frequently called me back to help him down precipitous places.”

I had always wanted to explore this storied yet deserted canyon so close to the teeming crowds of Yosemite Village. It happened that, in June 2004, I had a day to myself in the park. I decided to hike up the established trail beside the great Yosemite Falls and return to the valley by descending Indian Canyon. After parking amid the hordes in the Daytime Parking Area at Yosemite Village (parking elsewhere was not permissible) I made my way to the Sunnyside Campground. There I followed the signs for the Upper Yosemite Falls trail that switches back and forth in the shade of trees as it climbs to a wooded ledge about 1000ft above the valley floor. There I reached an overlook that provides a great view of the valley, with El Capitan off to the right and Half Dome to the left. I lingered to watch hang gliders swoop soundlessly beneath me on their way to a landing on the valley floor. Beyond the overlook one gets a brief reprieve from the tough climb for the trail contours east along the loose wooded ledge. Turning a corner about an hour from the start, I was greeted by a spectacular view of Upper Yosemite Falls. Yosemite Creek drops more than 1400ft from the valley rim to a ledge above the Lower Falls. During its descent the water splinters into ballistic watery fingers, billowing curtains and wispy eddies. It is a magnificent and enchanted sight, one of endless fascination and delight.

From this vantage point you can see what was hidden to those in the valley below, namely that there is a broad ledge with many smaller falls in between the Upper and Lower Yosemite Falls. There are a number of different viewpoints along the trail, each of which seem to demand a few minutes of wonderment. Too soon, however, the trail contours into a corner high above this ledge before resuming the climb toward the rim high overhead. Here the switchbacks seem endless and one climbs into a steep valley hidden in a cleft to the west of the falls. The last set of switchbacks is most exposed to the sun and represented the toughest challenge of the day. With some relief I came to the top of the climb

about 1.5hr and 3.6 miles from the morning start. There I forked right at a trail junction and, following the signs, soon approached Yosemite Falls Overlook, the first of several marvelous viewpoints on the rim high above the valley. At the edge a steep and airy stairway leads over the rim to where you can peer straight down the Upper Falls. It is an awesome spectacle, one which will make even the most experienced climber cling to the handrail. It was here that John Muir challenged himself to edge closer and closer to the vertical in order to witness as much of the falls as he possibly could.

Along the main trail east of the overlook, an elegant wooden bridge spans Yosemite Creek just before it plunges over the edge. The creek here is a beautiful High Sierra river that invites you to tarry and enjoy its cool waters. So refreshed, I continued eastward along the trail as it switchbacked up the side of a low slickrock ridge and then contoured out to where the ridgetop meets the rim at another fantastic overlook called Yosemite Point, some 3000 vertical feet above the valley floor. Half Dome, previously hidden behind the ridge, is now revealed, adding its spectacular profile to the awesome view. And, in the distance, the endless peaks of the Sierra Nevada decorate the horizon. John Muir wrote of this vista: "Never before had I seen so glorious a landscape, so boundless an affluence of sublime mountain beauty." (from "My First Summer in the Sierra").

From Yosemite Point the last ascent of the day took me up and over the top of the ridge (elevation 7240ft) from where the trail begins a gentle descent down through forest into the upper reaches of Indian Canyon. A little under 4hrs and 6 miles from the start, I arrived at the stream crossing of Indian Canyon Creek (elevation 6910ft), a bucolic spot in a shallow wooded valley. I sat down by the stream to collect my thoughts and, as always at such moments, remind myself of the special care needed when I venture beyond the boundaries of normal human travel. Ahead of me were nearly 3000ft of steep descent and I knew I could not afford a single slip.

Leaving the trail, the gradient in Indian Canyon was initially quite modest. The easiest going was some distance up the bank from the stream among the trees where there were some faint signs of previous passage. But about 25min into the descent the canyon suddenly became much steeper and narrower. Ahead I got my first glimpse of the valley far below. Crossing to the right side, I worked my way slowly down the steep rock and earth slopes beside the rocky stream bank. At one point I followed a long detour on the right along an old, dry and somewhat overgrown stream bed that may have bypassed some tricky downclimbing in the main channel. Eventually this old stream course rejoined the main stream at a place where the canyon narrowed to about 30ft. Here the descent required the negotiation of a steep slope of large boulders.

Standing by the stream on one of these large boulders, I could see about 70yds of the boulder-strewn canyon below me. Pausing to get my breath, I was treated to one of those wonderful moments that make the wilderness so special for me. A large, cinnamon bear ambled into view and crossed the stream on a log about 70yds below me. He or she had not yet suspected my presence and was making his way up canyon confident that he ruled this domain. The thrill I felt was soon tempered by the need to prepare myself for our imminent



Left: Looking down Indian Canyon. Right: Indian Canyon from Glacier Point.

encounter in this narrow passage. First I grabbed a large stick that lay nearby, not so much in the belief that it would be any protection but rather to bolster my own resolve. Then I devised a plan. The bear was following a rocky route on the right side of the canyon. The left side was lined with bushes and there was a narrow passage between the bushes and the canyon wall. This passage seemed to provide the best way for me to pass the bear without provoking a confrontation.

Moments later the bear again came into view, casually ascending by the right side of the stream about 40yds below me. I blew my whistle as loudly as I could. The bear looked up, startled and immediately scurried behind some boulders on the right. This was, in fact, the last that I saw of him. Reassured that he was on the right, I loudly and with much whistle blowing made my way down the passage on the left, continuing until I was well downstream of where I had last seen him. I reached a place where the canyon opened up a little and I could be fairly sure that the bear was now above me. But I hastened on for another 20min or so to be sure that we were well separated.

There I sat to get my breath and to reflect on this experience, both delightful and thrilling. I guessed that this was one of those bears that regularly visit the valley during darkness and take refuge in the high country during daylight. Indeed, it should have occurred to me that Indian Canyon is one of the few safe routes by which a bear could commute between the valley and the high country without encountering humans. The reaction of this bear strongly suggested that he was accustomed to avoiding humans whenever he encountered them.

Whatever the reasons for the encounter, it had been a very special moment and, despite my apprehension, I relished the opportunity to come so close to such a magnificent animal in its natural habitat. I will never forget the easy insouciance with which he ambled across the log bridge and sauntered up canyon

toward me. At one and the same time I felt an interloper in his kingdom and yet also, with him, a part of a remote and special wilderness. Of course, I also felt some pride in negotiating the crossing of our paths with minimal trauma.

The thrill of this encounter colored the rest of the descent. At an elevation of around 5600ft the canyon became less brushy with more trees and larger boulders. A little route finding was needed in places. At 5350ft the gradient began to decrease though there were still downclimbing challenges. The stream disappeared underground at about 5150ft though it reappeared about 600ft further down the canyon. Then at 4680ft I came to the only significant downclimbing challenge in Indian Canyon. A row of huge boulders blocked the canyon so as to create a drop of about 25ft in the stream bed. To descend I had to find the gap on the far left and climb down through a slot onto a broad flat ledge. The ledge had a 15ft drop all around it but by following a narrow ledge on the left out to a small but stout tree growing horizontally out of the rock face, I was able to downclimb a small arete with footholds.

Downstream of this challenge, the going eased, the canyon broadened and I found an easy route through the forest on the left. At 4130ft an asphalt path appeared and within minutes I was standing beside a very busy Yosemite Valley road. Trouble was, I was not entirely sure whether to go left or right in order to get back to the parking lot. My mind was still set in the mode of the unselfish human cooperation one finds in the wilderness and I began to signal vehicles to slow down so that I could ask the way to the parking area. But they all studiously ignored my signals and drove on. Awakening to my naivety, I looked down at myself and recognized that my disheveled and dirty clothing made me look like a homeless person. I stopped signaling vehicles. A jogger happened by and she had no choice but to respond to my question. I set off for the parking area depressed by my re-entrance to what passes for civilization. Then my mind returned to the image of that beautiful animal gliding over the log bridge and I smiled again.

Chapter 38

SKELLIG MICHAEL

“... they landed me on the most fantastic and impossible rock in the world: Skellig Michael, or the Great Skellig, where in south west gales the spray knocks stones out of the lighthouse keeper’s house, 160 feet above calm sea level.”

From a letter by George Bernard Shaw to his friend Jackson, Sep.10, 1918.

Around the world there are a few special structures that represent the pinnacle of human endeavor and achievement. Some, like the Taj Mahal, are unique for their elegance. Some, like the Great Pyramids, the Great Wall or Stonehenge, are wondrous for their engineering. Others, like Macchu Picchu, were constructed in spectacular natural settings. Then there are a few that cause us to truly marvel at the limits of the human spirit. This story is about one such place.

Out in the raw north Atlantic, an eight mile voyage from the rugged southwest coast of Ireland, there is a precipitous pinnacle of rock that rises some 700ft above the waves. This sea-girthed mountain top, storm-shredded and wave-smashed, surrounded on all sides by dark cliffs rising sheer out of the ocean, is known as Skellig Michael. The apex of this island consists of two peaks: the lower, 607ft peak is rounded and has some grass-covered spaces. The higher 715ft South Peak is an almost vertical crag with a sharp rock summit. In between the peaks is a feature known as Christ’s Saddle (elevation 400ft). Needless to say the area available for human exploitation is very small and very high above the ocean. One would expect that the rock could only be home to a few fearless seabirds. Yet sometime in the sixth century, when the rest of Europe was deep in the Dark Ages, a small group of ascetic monks sailed from the Irish mainland in fragile currachs (boats made of animal skins and tar) and made perilous landfall on Skellig Michael. Some believe they were

fleeing from the rampaging savagery of their fellow men. Others think they were seeking the ultimate austerity, believing that brought them closer to God.

Whatever drove them they were determined to make permanent settlement in this fierce place. They managed to climb the cliffs to the saddle and thence to the flat spaces on the lower summit. There, over the decades, they constructed a tiny monastery from the only material available, namely the rock itself. Due to their stone construction and their isolation, the remains of this monastery are remarkably well preserved and consist of six small beehive cells, round on the outside and rectangular within. Two places of worship were also built; one was later improved and dedicated to St. Michael so that, thereafter, the islet became known as Skellig Michael.

The monastery managed to survive for some four centuries, living on rainwater, seabirds, fish and the little oats and vegetables they could grow on the tiny plots of cleared land. They also needed supplies from the mainland. But, even here in this remote place they were not able to completely escape the marauders; the Vikings sacked the monastery in the ninth century and a number of times thereafter. Perhaps that is why the monks built a tiny retreat atop the highest place on the island, the 715ft South Peak. The climbing route to this precarious perch is daunting and much more easily defended than the monastery on the lower summit. Indeed, there is one spot along the route known as the Needle's Eye where a single man could defend against an army. Of course, it is also possible that this aerie was developed as the ultimate in devotional austerity.

On Aug.22, 2004, Doreen and I disembarked from the lobster boat at a small jetty in Blind Man's Cove, one of the few sheltered places anywhere around Skellig Michael. Over the internet we had booked passage for this date with Ken Roddy but had allowed ourselves several subsequent days in case the weather cancelled the trip as it frequently does. As soon as we landed at Cork Airport on the evening of Aug.21, I called Ken who informed me that the forecast for the next day looked good; it might, indeed, be the best day for the coming week and maybe the only one. This accelerated our schedule and we left Cork at 6.00am the next morning to drive to Portmagee at the far end of the Iveragh Peninsula on the Ring of Kerry. Ken was waiting at the pier and, with about 10 other intrepid tourists, we soon boarded his lobster boat for the ocean crossing.

We left Portmagee about 10.30am and were soon pitching up and down in the Atlantic as we emerged from the Portmagee Channel and the shelter of Bray Head. The Skellig rocks were now clearly visible but still eight miles of ocean away. The sealife immediately signaled that we had left the dominion of man for seabirds flew by in elegant formation and dolphins raced to play alongside our boat, leaping in the air just feet away as if to inspect this latest group of adventurers. Over the next hour the Great Skellig loomed ever larger ahead of us. In the lee shadow of this spectacular rock we could see one of the rock staircases that seemed to climb straight up the cliffs to the soaring summit. Soon we entered the tiny inlet, Blind Man's Cove, where a natural landing place had been supplemented by a small concrete pier. The boat rose and fell so that good timing was needed to safely step from the boat onto the pier. It was all done rapidly and soon the boat moved out and away from the dangerous rocks



Left: Portmagee. Right: Docked in Blind Man's Cove.



Left: Approaching Skellig Michael. Right: On the lighthouse road.



Left: South Peak, Skellig Michael. Right: Approach to South Peak.

to wait in the open ocean while we explored the island.

When the lighthouses were built in the 1820s a narrow road was blasted out of the cliff to allow access from Blind Man's Cove to the lighthouses at the far end of the island. Following this easy path, we contoured around high above Cross Cove and passed the steel helicopter landing pad built in mid-air overhanging the sea. About 400yds from the boat we came to the point where the lighthouse road intersects one of the monk's stairways, the South Trail that zigzags 500ft up from the South Landing to Christ's Saddle. The monks built several other stairways, one directly up from Blind Man's Cove to the monastery

and another from the Blue Cove on the north side up to Christ's Saddle but neither of these are practical or safe for today's tourists.

Just a short distance up the stairway from the lighthouse road is the Wailing Woman, a projecting rock formation of odd and haunting form. In times gone by, she was one of the penitential stations of the cross on the way to the heights above. To the secular visitor today, she seems to stand guard, testifying to this special place of myths and spirits and reminding the visitor that their stay is brief and insubstantial. Beyond this guardian, the stairway steepens and the view down to the ocean becomes increasingly intimidating. Eventually, the stairway edges into Christ's Saddle, 400ft above the waves. Here, Doreen and I paused to rest in the reassuring but tiny area of flat ground between the peaks with great cliffs above and below.

Here, too, Doreen was kind enough to wait, kind enough to indulge me while I fulfilled my ambition to leave the normal tourist trail and climb the daunting, 715ft South Peak. Several centuries ago the South Peak became the destination of pilgrims determined to visit the stations of the cross all the way to the summit of this awe-inspiring peak. There they would edge their way along an overhanging rock known as "The Spit" to kiss a standing stone perched on the end. That stone fell into the ocean some years ago but the magnetic pull of the South Peak has not been reduced as a result. Apart from the spectacular views and the excitement of the climb, there are the remains of the tiny hermitage built on a ledge high up on the South Peak perhaps a thousand years ago. It is even more awesome than the view.

A left fork at Christ's Saddle took me up to a narrow ridge that connects the South Peak with an outcrop of rocks to the southwest. From there one accesses an improved ledge that contours around to the western side of the peak. Here I found that ropes had been strung along the ledge as a safety railing though they were not essential. The ledge trail ends about 15ft below a large perched boulder separated from the mountain by a narrow defile called the Needle's Eye. Scrambling up the rock face below this feature, I had little difficulty in climbing up through the Needle's Eye. Indeed there are convenient footholds that may have been cut into the rock centuries ago. One surmises that the Needle's Eye may have allowed the South Peak to serve as a safe refuge since a few men could guard the Eye against a host of raiders.

Emerging from the top of the Needle's Eye, one is rewarded with an awesome view. Just below on a rock outcropping is an ancient enclosure whose purpose is difficult to imagine; far below that are the ruins of a more modern structure, the remains of the second, upper lighthouse now long abandoned. Turning around to face the peak, one recognizes a steep but easy climb up a slight gully with many good footholds. Forty feet up you emerge onto the end of a flat ledge known as the Garden Terrace. This ledge seems natural but it is in fact of human construction being supported underneath by hidden, man-made retaining walls; it may or may not have served as a hermit's garden. The ascent resumes back at the northwestern end of the Garden Terrace where you continue to climb up the rock face for about 20ft to a comfortable path. In the southeastern direction this path leads down to the most important archaeological site on the South Peak,



Left: South Peak Trail. Right: Lighthouse from trail.



Left: Oratory Terrace. Right: Monastery from South Peak.

namely the Oratory Terrace. Here one finds, among other relics, the remains of a small oratory built by the monks. Clearly this was intended as much more than a station for short visits, because an intricate system of water collection has been chipped out of the rock face and terminates in two interconnecting water basins. It is an awesome place with an incredible view and causes one to marvel at the human spirit.

The summit of the South Peak is only about 45ft above the Oratory Terrace. To reach there you retrace your steps up the ledge leading to the Terrace and past where you ascended from below. The ledge leads into a corner where, with the aid of good foot holds and hand holds, you can climb last 15ft to the summit. The peak itself is adorned with a modern iron weather vane but the eye is soon



Left: Stairs from Christ's Saddle. Right: Monastery.

drawn to the incredible spectacle in every direction. Almost directly below you on the east is Christ's Saddle and to the northeast you see, for the first time, the lower rounded peak and the tops of the beehive cells that constitute the monastery. On the north and west the cliffs drop straight down to the ocean waves, while the upper and lower lighthouses are visible to the southwest and south. It is a special place to have the privilege to visit and one can readily understand how it became a place of pilgrimage.

Reluctantly I dragged myself away from the summit and quickly descended to Christ's Saddle where I rejoined Doreen. From there we climbed the last steep stairway that leads to a ledge trail with an enormous 600ft of exposure down to the ocean waves. Traversing this ledge trail, brought us to the doorway through the first curtain wall just below the monastery. The curtain wall encloses a courtyard that overlooks other clearings and small structures right at the edge of the cliff. We spent a few moments here getting our breath and admiring the marvelous sea vista before us. Little Skellig dominates the seascape and the tens of thousands of seabirds that roost on that island made it appear like a great white bee's nest. The rugged southwest coast of County Kerry completed the backdrop that, on this day, was blessed by a blue sky background.

A massive dry stone wall protects the monastery on this southeastern side and access to the inner courtyard is by way of a tunnel doorway through this great wall. Climbing up the steps at the other side one is greeted by the line of six beehive structures with their corbeled stone roofs. These beehive structures have a square planform inside and a circular one outside. A set of projecting roof rocks allowed the monks to climb to the top of the structure and open or close a rock that covered the top of a chimney. Only one roof is missing and it may well have been dismantled by the monks themselves. Between the line of

beehive huts and the great wall the courtyard is filled by one intact oratory, the ruins of a more modern church, the Church of Saint Michael, a tiny graveyard with gravestones and a large Celtic cross. The older intact oratory is similar in structure to the beehive cells except that it has a rectangular planform both inside and out. A window and a doorway of the Church of St. Michael still stand though much of the rest is gone. One lighthouse keeper buried two of his infant sons in the church and covered their graves with an inscribed gravestone. But this is the only modern incursion that has been allowed to remain. It is indeed a wondrous place, a treasure preserved by isolation. Doreen and I ate our lunch and listened as one of the docents told us what little is known of those remarkable dark age inhabitants.

Too soon, however, it was time to take our leave, to struggle down 600ft of ancient stairway back to sea level. Descending was in some ways more of a challenge than ascending for looking down at the sea so very far below us was seriously intimidating. However, we made it slowly but surely. We had been told to meet the lobster boat back at the jetty at 2.00pm after 2.5hrs on the rock; everyone was there on time and quickly boarded the boat for the return to the mainland. As the boat drew away from the island, we looked back in admiration at the imperfect refuge of those ancient hermits, marveling at the unquenchable spirit they needed to survive in this awesome place.

Chapter 39

FLOWERS ON THE WAY TO SLIEVE GALLION

*“What is life? It is the flash of a firefly in the night.
It is the breath of a buffalo in the winter time.
It is the little shadow which runs across the grass and loses itself in
the sunset.”*

Last words of Crowfoot, Blackfoot Indian (1821-1890).

Slieve Gallion is the easternmost summit of the Sperrin Mountains in the western part of Northern Ireland. Rising to 1730ft and only the 398th highest mountain in Ireland, it would rank as no more than a small pimple in most landscapes. But the broad flat summit, a blanket bog of wet heather and continual rainfall, is world's away from the green rolling farmland just 1500ft below for, at this high latitude, the weather changes rapidly with elevation. On the southwest, the water runs off into a lovely mountain lake, Lough Fea by name. The crystal clear water has sustained people for thousands of years for, on a small hill in the townland of Ballybriest just 1/4 mile away, there are the remains of several neolithic long cairn graves. The views from there are superb in all directions, northeast to the barren summit of Slieve Gallion, southwest to Lough Fea and far off to the western horizon of the Sperrins. Only important chieftains could have warranted such an immortal view.

Growing up in the village of Magherafelt just a few miles away, Slieve Gallion and Lough Fea represented the only real wilderness within the domain of my ramblings. My father loved to explore the narrow mountain roads that snaked up into the heather and around the lake. We would often take Sunday afternoon drives to places like Carndaisy Glen, a beautiful wooded glade on the slopes of Slieve Gallion. On a warm summer Sunday, a picnic might be planned for the glen or for the shores of Lough Fea itself. We especially liked the wooded

near-island that jutted out from the south shore of the lough, a mound with a symmetry that suggested some ancient human shaping. I remember one Sunday in June 1952 when my youngest brother Colin, aged six, nearly drowned and my father dived deep into Lough Fea to recover and revive him. And every few winters, as in 1955, there would be a spell of weather cold enough that Lough Fea would freeze over and we would mount an ice skating expedition.

The year of 1958 marked my last as a Boy Scout for I had found many other diversions. However, before leaving, I had striven to complete one of the more advanced “badges” or awards that scouts could earn. One of the requirements for that badge was to undertake an overnight hike in a desolate area. The obvious choice was an adventure on Slieve Gallion. Peter Burton was a class mate and a fellow member of the local scout troop and he and I formed a plan for the overnight hike. We would hike the five miles from Magherafelt along the local roads to Carndaisy Glen where we knew of some grassy camping spots by the stream that ran through the glen. On our way to Carndaisy Glen, I recall that we may have cheated a little by accepting a ride on a tractor for several miles. In any case we pitched our tent by the stream in the glen and cooked some flap jacks (made from flour, butter and water, I think) on the hot rock beside our camp fire before turning in for the night.

In the morning, after breakfast, we set off up the lovely glen as it climbed onto the slopes of Slieve Gallion. I particularly remember the patches of iridescent bluebells. Perhaps it was they that caused me in the years that followed to associate flowers with Slieve Gallion. Indeed, when I took up oil painting many years later, my first effort was entitled “Flowers on the way to Slieve Gallion”. Though it is of little artistic merit, I still keep that painting tucked away in a closet.

To return to the hike, we emerged from the top of the glen and transitioned onto the heather-covered moorland that covers most of the high ground on the mountain. Here the going got tougher for there were fewer tracks to follow and the heathland was mostly soggy underfoot. As we reached the broad summit of the mountain, it began to rain and the day became quite miserable. We slogged our way across seemingly endless moorland, the rain having penetrated all of our clothing. Peter became quite dispirited and I can recall having to urge him on. It was my first experience of wilderness loneliness, my first sense of being at the mercy of nature. Not that I felt much fear for, even then, I had great confidence in both my physical endurance and in my navigational ability. It probably only took a few hours but after three miles of off-road travel we were back on established trails and descending the other side of the mountain. Once back onto those paved lanes, I regained confidence that we could complete the last four miles of the hike without having to call for assistance. Coincidentally, the sun came out and I recall sauntering down the mountain road with satisfaction in my accomplishment while also reveling in the beauty of the drying countryside. We completed the hike by road through Desertmartin and back to Magherafelt with plenty of daylight to spare. That adventure was my first real challenge in the outdoors and one whose success stayed with me the rest of my life. It also created a special affection within me for Slieve Gallion, the mountain that



Slieve Gallion.



Ballybriest neolithic cairn.

would witness other moments of joy and sadness during my life.

Corporal Albert Symonds was killed on July 15, 1944, at the fierce battle for Caen, just after the Normandy landings in France that began the end of the Second World War. He was just 26 and left behind a wife and very young daughter, Laverne, just over a year old. Laverne grew up in a small market town in the shadow of Slieve Gallion, a place called Cookstown. She was raised by her mother, Gertrude Symonds, and her grandmother who were very protective of her welfare. They lived in a terrace house on the west side of Oldtown Street in Cookstown and, when she was old enough, Laverne attended the Rainey Endowed School in Magherafelt. There, in the autumn of 1958, I first became aware of this skinny girl with the sultry smile. I was infatuated by her languid sexuality and in a few months we became high school sweethearts. She was the only woman with whom I had a significant relationship before I met my wife and that was several years later, after I had left high school. Laverne and I had a mercuric relationship, sometimes on, sometimes off. It seemed to me that she no sooner had me in tow than she would become interested in another boy. But we shared many special moments whose memory could not but stay

with me down through the years. I remember one spring afternoon, March 22, 1959, when we drove to Lough Fea and walked and talked along the lake shore and among the neolithic gravestones. A year later, at Easter 1960, we visited London together where she stayed with relations in High Barnet and I roomed in the YMCA in central London. However, in the summer of that year, our two year relationship came to an end for, in July 1960, I met and fell in love with Doreen.

In 1961 Laverne entered Queens University, Belfast where she became the second woman in the history of that university to earn a Civil Engineering degree. I think the last time I saw her was in 1962 when Doreen and I encountered her briefly while walking along University Street on the Belfast campus. After graduation she took an administrative job in a university library. In Belfast, she met and married David Haskins, a teacher, and they had a son, Michael. After Michael's birth Laverne suffered severe post-partum depression and never returned to work; David believes she never fully recovered. She and David were separated and Laverne lived the rest of her life in Lisburn with Michael while David moved to a terraced house in Belfast. Michael became a musician, a guitarist with a group called Maya.

But I knew little of what had become of her after graduation. There were many moments when I thought to make contact with her out of curiosity more than anything else. But I could never quite justify such a contact as long as there was even the remotest possibility that Doreen might be hurt. Finally, however, in the year 2004, while visiting Northern Ireland, I acquired David Haskins' telephone number and called him to enquire as to how I might get in touch with Laverne. He informed me that Laverne had died of ovarian cancer on July 11, 2004, just a month earlier. After more than 40 years, I had reached back a month too late.

Her son and her mother were with her when she died. She was cremated on July 15, the date on which her father had been killed. Several days later, in accord with her wishes, her ashes were scattered to the winds at the Ballybriest neolithic cairn overlooking Lough Fea. A month later I stood alone in the rain and placed flowers on those ancient stones. Flowers on the way to Slieve Gallion.

Chapter 40

RATHLIN ISLAND

*“I have traveled through great beauty
You cannot ask for more than that.”*

Anonymous.

Rathlin island off the north coast of Ireland is a storied place of myths, massacres and abundant wildlife. Its isolation of old, maintained by the fierce north Atlantic, has been extended into modern times by an episodic and uncertain ferry service and this isolation has preserved this quiet and lovely place for the enjoyment of today’s occasional visitors.

Perhaps the most widely known legend of Rathlin concerns the Scottish king Robert I, known as Robert the Bruce. During his early struggles to establish dominion over Scotland, Robert suffered a number of serious setbacks. Fleeing from a defeat at the Battle of Strath-Fillan in 1306, Robert took refuge in a cave on the island of Rathlin. There he was bemoaning his fate when he began to watch a spider struggling to build its web within the cave. Many times the spider failed, but each time it began again. In the end, the spider succeeded in creating the web and, inspired by the spider’s example, Bruce emerged from the cave, revived his campaign, and went on to win a famous victory at the Battle of Bannockburn in 1314. Crowned Robert I, he had a long and successful reign as King of Scotland. But he will forever be known to the world (and in countless children’s books) as a classic example of persistence.

Though much doubt surrounds the historical accuracy of the legend and its location, the Rathlin people point to a sea-cave on the rugged northeast headland of the island and identify this as “Bruce’s Cave”. I learned that it was at the bottom of a sheer 200ft cliff and just south of the East Lighthouse that guards this storm-tossed corner of the North Atlantic. Atop the cliff not far away are the remains of a castle that was built in the 12th century and occupied by Robert the Bruce during his travail. Today’s guidebooks claim the cave is

only accessible by boat and only during calm seas, a rarity around Rathlin. This story recounts my expedition to seek out and visit Bruce's Cave.

The ferry was much larger than I expected. A landing craft type vessel, it had lowered its gangway onto the slope of the launching ramp in Ballycastle harbor and was ready to accept as many as half a dozen vehicles. But there were no vehicles this morning. Only about a dozen people had bought tickets in the harbor office and had wandered on board the Caledonian MacBrayne ferry for the 10.30am trip across to Rathlin island. As we waited to depart a seal played among the harbor rocks and a shearwater stood watch on the harbor wall.

The 6 mile trip from Ballycastle to Church Bay on Rathlin Island takes a little over 30min. The currents in this channel can be quite fierce; they create visible patches of turbulence that the ferry seeks to avoid. However, the L-shape of the island means that Church Bay, within the L, is sheltered from both the ocean and the wind. The currents and frequent storms have resulted in many wrecks around the coast of Rathlin and make this a popular diving venue. One prominent wreck within Church Bay is that of the warship HMS Drake that was torpedoed here by a German U-boat in 1916. It is now populated by many large conger eels. Other sea life greets the visitor in Church Bay harbor, home to a large population of seals who bask on the rocks next to the tourists.

The sun was shining as I disembarked and turned left away from the village. I stopped briefly at the lovely Church of St. Thomas, built in 1722, and maintained today with exquisite simplicity and elegance. Just past the church the road turned inland, climbing steeply toward the flat plateau on top of the island. Continuing on through a four-way junction at the Roman Catholic Church, the road turns east and, within 0.5 mile, becomes a gravel-surfaced driveway that leads to the East Lighthouse on Altacarry Head. Here the plateau is exposed to the elements and the grassy slopes that characterized the land further southwest are now replaced by heather-covered heathland. The East Lighthouse itself, built in the 1850s, sits atop 200ft cliffs that plunge vertically down into the sea. It is famous as the site of Marconi's first radio transmission made between here and Ballycastle in 1898. The lighthouse and associated buildings are contained within a walled compound to which access is forbidden but that is not a problem for the hiker exploring the cliffs to either side of the headland.

After a brief visit to the coast north of the lighthouse, I made my way along the southern wall of the compound and began a detailed inspection of the cliffs that drop straight down into the ocean at that point. My purpose was to locate Bruce's Cave from the cliff top and, if possible, to find a way to climb down to it. The slippery grass that grows everywhere made it quite difficult to safely get a view over the edge of the cliff but by venturing onto several promontories and looking backwards I came to the conclusion that there were no caves directly beneath the lighthouse. At least no caves with any access from above. I then continued my precarious survey working my way southwards along the cliff's edge. About 100yds from the lighthouse, I came to a slight break in the cliff where a steep, grass-covered gully descended to a rocky ledge far below. I could see that there were substantial sea inlets to either side of my cliff top vantage



Left: Church Bay harbor. Right: East Lighthouse.



Left: Route to Bruce's Cave. Right: Bruce's Cave.

point. The inlet to the right or south of the gully seemed very promising and the only likely location of Bruce's Cave that I had found so far. Trouble was that the steep grassy route down to the ledge veered right across the top of a vertical drop into the left inlet. But I planned out the footholds and handholds in detail and, leaving my pack at the top, began the downclimb. In the end, I descended to the ledge with little difficulty though the route might be much harder on a wet day. Reaching the broad ledge, I looked right and there it was - a beautiful and deep sea-cave, Bruce's Cave. A deep and navigable channel ran into the cave and culminated in a rocky beach about 20yds inside the cavern. I was able to tightrope along ledges on the right all the way to the cave entrance. I could have readily reached the beach by wading but chose to stay dry for the island had much that I had yet to see. It was clear that the cavern extended some distance inland but I could not discern quite how far that was.

I returned to the sunny ledge and sat down to enjoy this remote place and my success in reaching the cave. It had turned out to be a beautiful day, sunny and calm. I thought about the Bruce, the spider and my own resolve. Sometimes I seem to set my mind on objectives that only I imagine have value; and I do

admit to a single-minded tenaciousness in pursuing those goals. But, at the very least, these whims bring me to places of undeniable beauty and to experiences that are deeply gratifying. Maybe, above all, these whims have opened windows into myself.

But time was awasting and there was much yet to see on this lovely island. I gathered myself for the climb back to the cliff-top, an ascent that was, as always, much easier than the descent. Continuing southward, I soon spotted the little remains of Bruce's castle on a small plot of land almost completely cut off from the cliff top heathland. The remains consisted of two small sections of wall at the edge of the cliff-ringed sea stack. A narrow land bridge allowed access to the castle from the mainland and I made the crossing to pay homage to Bruce. I also thought of the hundreds of native Irish that sought refuge here in 1575 and were massacred by the English army of the Earl of Essex.

From the castle, I hiked across country following a faint path in a western direction. This linked up with the end of a dirt road that took me to the southern asphalt road back to the village. The excursion to Bruce's world had taken just 2 hours. During lunch at the village pub, I learned of a bus tour that would take me to the seabird sanctuary at the other, western end of the island nearly four miles distant. The tour had been scheduled to depart about an hour ago but had been delayed because both batteries aboard the bus were dead. The owner operator was around the corner slowly recharging the batteries. There was a depressing prediction that it would take at least another hour to complete this task. I decided to start walking knowing that I could flag down the bus if and when it caught up with me but also knowing that there was insufficient time to hike to the west end and back. In the event, the bus did catch up with me after about a mile and I enjoyed a delightfully rustic bus tour of the west and southern ends of the island before returning to the village in time for the 3.30pm ferry back to the mainland. Highlights of the bus tour included the precipitous seabird sanctuary at the dramatic western headland and the two ruined buildings at the southern tip. One belonged to the smugglers and the other, just a few yards away, belonged to the coastguard whose primary task was the prevention of smuggling. Only in Ireland.

Chapter 41

SKARA BRAE

*“And think in Orkney
Of the old friendship of stone and man,
How they honoured and served each other.”*

From “The Friend” in “Travellers” by George Mackay Brown (2001).

Five hundred years before the construction of the pyramids in Egypt, Neolithic farmers on the bleak Orkney Islands off the northern coast of Scotland began the construction of the stone village that has become one of the most wondrous archeological sites in the modern world. We now call the village Skara Brae (location 59°2'55.4"N 3°20'29.9"W). Construction began about 3200BC and it was occupied for about 1000 years before it appears to have been hurriedly abandoned, perhaps because of a storm though deteriorating climate may have also been a factor. The houses as well as the furnishings and tools therein have lasted some 5000 years because they were quickly covered over by sand and earth and because they were made largely from stone rather than wood. It is truly eerie to walk through this fossilized village, imagining the daily life of those Neolithic residents.

Like other works of man lost in the mists of time - like Machu Picchu or Xian's terracotta warriors - Skara Brae was discovered accidentally. In 1850 a violent storm and the raging Atlantic stripped the sand and earth from the top of a mound just inland from the Bay of Skaill on the bleak western coast of the Orkney mainland. This revealed the outline of a miniature stone village replete with walled houses and passages between them. Though the discovery was neglected for a long time and even plundered, it eventually received the attention it deserved and the subsequent excavations unveiled a remarkable Neolithic culture. Today it is one of the most remarkable Neolithic monuments in the western world.

The people who inhabited Skara Brae were Neolithic farmers. They grew wheat and barley and kept cattle and sheep. The weather in their time seems



Neolithic village of Skara Brae.

to have been more friendly than present day but a worsening climate may have contributed to their abandonment of the village that was covered over by sand and earth about 2200BC. But the culture clearly flourished for many centuries and there is every chance that shards of their DNA came down through the millenia into my own blood.

In September of 2006, I traveled to Ireland to fulfill a commitment that, many months earlier, I had made to the school in Magherafelt, Northern Ireland, where I had received all of my early education and to which I owed a great debt for the start they gave me in life. The head master of the Rainey Endowed School, Magherafelt, had invited me to attend their annual prize-giving and graduation ceremony, to address the assembled school, parents and teachers and to present various prizes for academics and extra-curricular activities. It was a pleasure for me to do so for I felt there was much I wanted to communicate to the girls and boys who were just starting the adventure of life. After the formalities and following the usual agenda, all of the participants and friends gathered in the adjoining dining hall for refreshments and conversation. There I had the pleasure of renewing many old friendships and greeting many new acquaintances. The room was crowded and I found myself in the middle turning from one greeting to another, almost always recognizing the faces but seriously deficient in matching names to those faces. Then, suddenly, I heard a special voice behind me and turned to find myself face to face with an old flame from many decades ago; we clasped hands, holding them close to our chests. We looked in each others eyes and remembered a very special feeling from long ago.



Left: House #1. Right: House #4?



Then someone else turned me around again and when I looked back she was gone. But I was struck by the abiding memory of that special feeling from long ago; while everything else from that evening would soon fade inconsequentially away, that meeting and that feeling would be with me for the rest of my life.

The next day, Sep.17, 2006, I flew to Scotland and, with stops in Edinburgh and Inverness, traveled in a small British Airways plane to the Orkney Islands, where I arrived at Kirkwall Airport in the pouring rain. There I rented a car and headed west through the rain for the marshy and desolate heaths of the western Orkneys. In modern times, it is hard to imagine why Neolithic farmers so valued this land. They invested great energy to build ever-enduring stone monuments upon it. I found a bed and breakfast room for the night and bedded down hoping for enough dry weather in which to enjoy my visit to this remarkable and unique remnant of the remote past. Thankfully the rain had gone by morning and, after easily finding my way to the edge of the Bay of Skaill, I was able to take my time enjoying both the exhibits and the ancient monument of Skara Brae. Though I enjoyed trying to work out the purpose of each of the pieces of stone furniture, my mind kept drifting back and forth from the ancient stones to the events of the preceding few days. These stone houses had lasted 5000 years and, no doubt, would last long into the future. Their story, their memory would never fade. I thought about my own memories from long ago and from the preceding day; those, too, would last forever, for

me and maybe for her. They had the same rock hardness of lasting truth. Like those stones out on the edge of the Orkneys, the memories would sit quietly on the edge of my being without effecting the rest of my life. I would occasionally remember them and always with pleasure; but they would always be intensely private, always as secure and silent as the stones of Skara Brae. As I drove away the words of the renowned Orkney poet, George Mackay Brown, kept returning to me: "And think in Orkney of the old friendship of stone and man, how they honored and served each other."

Chapter 42

HUAYNA PICCHU

*“ looming over you through the driven clouds, and right ahead,
at the end of the ridge, towers an appalling berg of rock, like the
fragment of a fallen moon.”*

From “The Condor and the Cows” by Christopher Isherwood (1949).

We had come to this stupendous and storied place to enjoy a shared adventure, perhaps for the last time. This would be a reenactment of a family tradition forged some thirty years earlier when the girls were just a few years old. Adventure was in their souls, perhaps even in their Scotch-Irish genes. Almost forty years before our small nuclear family had left the comfort of a Northern Irish homeland and ventured half way around the world, seeking new spaces in which to grow and prosper. Husband and wife, we had arrived in California with two small daughters, two large suitcases and two hundred dollars; all we had in the world. Since that brave journey there had been joys and sadnesses, triumphs and tragedies. Some the result of happenstance, some caused by the same venturesome spirit that encouraged us to reach for the sky.

It had been this way as long as any of us could remember. There had been the long car camping trips throughout the western United States, thousands of miles in a slightly faulty but stylish 65 Mustang to explore every reachable geological oddity or anthropological remnant. We had hiked as far as children’s legs could take them, into the Virgin River Narrows, through the Hoh rain forest, up to the glaciers of Mount Rainier and out to a myriad of other places. We had often ventured off-trail to find places others had not seen whether in the rugged and precipitous canyons of the San Gabriel mountains, the wondrous maze of rocks in Joshua Tree National Park, or the canyons of the Colorado plateau, anywhere something new or exciting might be found. Mishaps were, of course, inevitable. In those early days, they rarely meant more than an unexpected dunking or a twisted knee. Sometimes they even meant dangling on the end

of a rope for a short time before being rescued. In later life and in different circumstances, there were sometimes more serious consequences.

As the eldest daughter she had left home first, traveling across the continent to make her life in an eastern city. She had married an older man, only to discover after two children that their interests and personalities had diverged to the point of rupture. In the heat and trauma of that dissolution, she had become a little derailed. One awful night, Jan.5, 1999, that lead to a terrible accident. Driving too fast late at night on icy asphalt, her red 951 Turbo Porsche left the road and smashed, driver side first, into the trees. She was trapped upside down for hours, her lower body crushed among mangled metal. It took more than two hours for the firemen to cut her loose and load her into the helicopter for the short flight to the University of Pennsylvania Hospital. There the doctors diagnosed multiple fractures of the pelvis, two broken femurs, a broken right ankle and numerous lacerations. Orthopedic surgeon Christopher T. Born took on the daunting task of trying to reconstruct the lower part of her body. She was very lucky to have found herself in the hands of this skilled surgeon who performed five operations to reconstruct the pelvis (using five permanent pins), to align the femurs (using a rod through the core of one femur) and pin the ankle together with several permanent screws. She spent two months in the University of Pennsylvania hospital and another month in a rehabilitation hospice in Bryn Mawr. Then many agonizing months with daily physiotherapy in order to walk again. This too was interrupted by a final operation in the fall to remove the rod from the femur. It took patience, persistence and much pain as well as valuable help from her ex-husband, Bill O'Brien. But her innate optimism and irrepressible spirit equipped her for the struggle and within the year she could walk again, albeit slowly and with a limp. Her case was so unusual that Dr. Born published a research paper on it. But she was not finished with the repair and by the summer of 2000 was able to send him a photograph of her rock climbing in Kings Canyon National Park, a picture that he proudly included in the verbal presentation of his paper at a scholarly symposium.

But she still limped, was still impaired in her movements so there was still work to be done if she was to live the kind of active life that she had been brought up to and that she wanted for herself and her children. There would be no more horse riding but there could still be great adventure.

Now she stood beside me in the midst of the lost city of the Incas. With her sister we had traveled to Peru and flown to the Incan capital of Cuzco. There we paused for several days in that beautiful sky-high city, partly to acclimatize and partly to enjoy the Incan and Spanish colonial history of the place. One guided tour took us to the huge Spanish colonial cathedral of Cuzco, built on the foundations of Incan palaces and richly decorated with imperious, gilded images. During that visit there occurred a moment that augured for something special in our own lives. Standing in the imposing nave of the cathedral, the daunting plumage all around, the cathedral bells began to toll slowly. Moments later the whispers could be heard everywhere and nowhere, "El Papa murio, el Papa murio, ...". It was April 2, 2005, and Pope John Paul had just died half a world away. I could not help but be reminded of my own mortality, of the need



Left: Machu Picchu. Right: Huayna Picchu. Photos by Danamichele Brennen.



Left: Climbing Huayna Picchu. Right: Tunnel on Inca trail, Huayna Picchu. Photos by Danamichele Brennen.



Left: Inca temple on Huayna Picchu. Right: On the summit of Huayna Picchu.

to relish these special days with my two beloved daughters; “.. never send to know for whom the bell tolls; it tolls for thee (John Donne, 1623)”.

A couple of days later we caught the early morning train that laboriously switchbacked its way up the mountains surrounding Cuzco and crossed the altiplano before descending again into the deep valley of the Urubamba river. Heading downstream through the ever-deepening gorge we left the dirt roads behind us just northwest of Ollantaytambo, only the railway and the raging Urubamba penetrating the deepening jungle beyond that point. Finally, five hours from Cuzco, the train edged into Agua Caliente, a jumble of vendor stalls, hotels and restaurants squeezed into a strip of jungle between the Urubamba and the towering cliffs. We had come to the land of cloud forest and the mist hung in great clumps over the heights above us. A raft of buses were waiting for the train and we were soon switchbacking our way up the dirt road toward the ridge, 1300ft above the Urubamba, a ridge where the Incas built their magic city of Machu Picchu. We spent the day there, first on a guided tour, and then in our own explorations. The day tours left in mid-afternoon and thereafter we enjoyed the lack of crowds and the improving weather as the mists cleared and the sun began to peek through. It was a glorious afternoon in a magnificent place.

Though much of Machu Picchu's history is shrouded in mystery, the most widely held view is that the city was built by the Inca emperor Pachacutec in the mid 1400s and that it served as both a ceremonial and agricultural center. The astronomical alignments of its temples and monuments are very sophisticated and the extensive agricultural terraces may have been used to grow plants adapted to the wet jungle climate rather than the drier Inca heartland. Some think that Machu Picchu's isolation may have led to a decline prior to the Spanish arrival in Peru. What is certain is that it was completely abandoned before it could be discovered by the invaders; Pizarro marched right past it on his exploration down the Urubamba. This was great good fortune for Machu Picchu was rapidly overgrown and for centuries lay hidden in the jungle, one of the very few Incan cities to escape destruction by the Spaniards. Not until 1911 did the American archaeologist Hiram Bingham uncover its hidden splendors.

The city was built on a narrow ridge that lies inside a sharp, 180 degree bend in the Urubamba river. It is a natural fortress site, easily defended since the 1300ft drop down to the Urubamba is nearly vertical on three sides. On the fourth side, overshadowed by the 10,040ft Machu Picchu mountain, the Inca built a wall, a gate and various guard houses to protect the city. At the other end, the far end of the ridge, a precipitous basaltic column rises like an exclamation mark to a sharp summit, another 1000ft above the city. This awesome pinnacle, known as Huayna Picchu, was sacred to the Incas who managed to build some remarkable structures on its precarious summit. In several places their paths and terraces look down over 2300 vertical feet to the Urubamba.

Somehow during the rest of that day and evening, as we relaxed at our hotel in Agua Caliente, a plan to climb Huayna Picchu crystallized in our minds. None of us were quite sure we had the strength after our exhausting travels and

the toll that the altitude had taken on our constitutions. When the morning came Kathy, my younger daughter, did not feel well enough for this extracurricular exploit and resolved to spend the morning resting among the Incan ruins. Dana had done nothing like this climb since her accident and so it became an unexpected but welcome test of her long rehabilitation.

So it was that in the morning mist we crossed through the lost city to its northwestern end where, at 7875ft, the ridge narrows to a knife-edge. There the Incas built a shrine and guardhouse, a hut that still serves the same purpose, for those who set off to climb Huayna Picchu today must sign in and sign out when they descend again. It is not quite clear what the authorities would do if someone failed to sign out; drain the Urubamba? We duly signed in and started along the rough trail that first descends about 100ft in order to cross the narrow spine that connects the main ridge top with Huayna Picchu. The climb up the steep trail toward the summit starts immediately and rapidly steepens; the ancient steps cut into the rock are sorely needed as are the ropes that have been added for modern climbers. We paused often to inhale gulps of thin air. Then on again. Dana climbed easily, exuding a delight in finding final confirmation that she was no longer handicapped; indeed she often had to wait while I caught up. Nearing the summit, the jungle around us merged into Incan walls and soon we were ascending the first steep staircase through those terraces. This led to the first great platform with a fantastic view of Machu Picchu and the land all around us. From this platform the trail proceeded through a short tunnel, emerging beside an “usnu” or holy site with walls built above a 2000ft vertical drop all the way down to the Urubamba. Then more stairs along the edge of that awesome cliff before we arrived at the jumble of giant boulders that adorn the summit. Climbing through and over several of these, overhanging the same huge drop, we finally gained the 8860ft summit of this awesome peak.

As it turned out, Dana had conquered Huayna Picchu with some ease and certainly no limp. Nevertheless the accomplishment symbolized a long and painful struggle, a rehabilitation that had been as much spiritual as physical. It would have been so easy, so comfortable to take refuge in the handicap, to let all those metal pins and rods bear the burden. To make the matter harder, along the way she had to deal with a host of other challenges that would have broken a lesser spirit. So this moment was one of rightful, jubilant celebration. I was and am deeply proud of what my daughter overcame and that pride as well as her joy are etched in the faces of the photographs we took that day. The Incas had carved a soaring condor into the face of the summit boulder. It seemed an appropriate symbol for what she had accomplished.

Chapter 43

PACUARE TEARS

*“Do not stand at my grave and cry;
I am not there. I did not die.”*

Anonymous.

A number of months before the cataclysmic diagnosis of Doreen’s cancer, I had learned that the American Canyoneering Association and its founder, Rich Carlson, were planning a trip to the canyons of Costa Rica. My tentative plan to attend this “rendezvous” with several of my fellow, southern California canyoneers had been abandoned in the maelstrom of the tragedy and I had not given it a second thought. But about a month after Doreen’s death when I had just started to function at some elementary level, two of those friends hatched a scheme to persuade me to go on this trip. Randi Poer called Scott Smith and encouraged him to take me to Costa Rica. They knew I would not go unless one of them was to ask me to accompany them. Scott is such a kind and gentle man that perhaps only he, of all my friends, could have persuaded me to go. I knew he would let me be alone with myself, that he would shield me from unwanted attention, unwelcome sympathy.

So it was that on Sep.1, 2007, with little preparation, I found myself boarding a plane at LAX on my way to San Jose, Costa Rica. Scott had persuaded me that a physical challenge in an unfamiliar but spectacular place would help me find a little distraction even if it could not ease the pain. And that country in Central America is nothing if not spectacular. Costa Rica has a spine of steep mountains and volcanoes covered in dense tropical forest. The rivers and canyons that run through these mountains are magnificent and present very different flora and fauna, a very different visual experience than any in the USA or Europe. Many small companies run guided adventures in this wilderness and we were joining a canyoneering group that had planned a selection of these adventures. We would base our activities in two different locales, spending a few days near La Fortuna in the Arenal Volcano area northwest of San Jose and

a few days more in Turrialba southeast of San Jose. In each of these locations, the group had signed up for help from guide services, Pure Trek Canyoning and Desafio in La Fortuna and Explornatura in Turrialba.

All of these companies had developed “commercial canyons” in which they had established anchors and other facilities to aid the inexperienced canyoneer. The defect with these commercial canyons is that they have usually been significantly altered to ease the passage for the guides and their clients. These alterations often include the installation not only of extensive fixed anchors but also of wooden platforms from which to enter the rappels. Some even have steps cut in the canyon bottom rock to ease downclimbs while in other canyons trails conduct the clients from one rappel to the next. Despite these alterations the canyons are spectacularly beautiful with luxurious multi-level canopies of tropical forest and exotic flora and fauna. It is a unique experience for a howler monkey to let loose with its terrifying howl just as you are about to enter a 150ft free rappel!

We spent the first four days at a ranch outside of La Fortuna, in the shadow of the towering Arenal Volcano. At night a continuous stream of red-hot rock could be seen tumbling down the side of this volcanic cone and lighting up the night sky. During the day the tropical heat and humidity combined with the surrounding jungle to create an otherworldly stage to draw my attention away from my grief. With this ranch as base we first descended two nearby commercial canyons, namely Piedra Canyon (translated as Stone Canyon but also known as Lost Canyon) run by the Desafio adventure company and Piedrita Canyon (translated as Little Stone Canyon) overseen by Pure Trek Canyoning. The first featured several big rappels (two from overhanging wooden platforms) and some downclimbing in a glorious tropical canyon with just a modest water flow. The second involved several big rappels from overhanging wooden platforms and descents through quite vigorous waterfalls. On the fourth day, the guides from the Explornatura Adventure Company agreed to show us a more remote, non-commercial canyon in order to exchange skills with the experts in our group. Thus we made our way through thick jungle to the upper reaches of the undeveloped Nonequito Canyon (translates to something like “no take away”) and spent the day descending a wild and natural tropical canyon with a beautiful series of rappels and vigorous whitewater. All of these adventures were enjoyable and comfortably distracting though not technically challenging.

The action then shifted to the town of Turrialba, the home base of the Explornatura Adventure Company. There we began with a descent of Puente Vigas Canyon (translated as Rope Bridge Canyon) just above Explornatura’s warehouse on the outskirts of Turrialba. This commercial canyon had been set up with a series of rappels interwoven with three long and exciting zip-line transits through the jungle canopy. Two of these ended high in trees and necessitated a rappel to reach the ground. These zip-line excitements were new to me and certainly entertaining but also well supervised and controlled. The adrenaline flowed but the soul was unstirred.

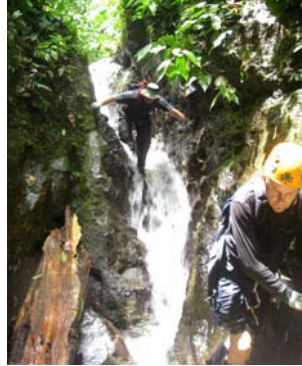
Scott had to return home and so I was left on my own before the last adventure; but I figured I should try to stand on my own feet. He had shown a

special friendship and I was not going to impose on him beyond the marvelous kindness he had already shown me. This last adventure was to be a two-day descent of the wild Pacuare River, a white water rafting trip through some of the most spectacular and untouched wilderness in Costa Rica. The Pacuare has its source in the Cordillera de Talamanca and flows 108km to the Caribbean. It leaves the mountains just before the town of Siquierres and downstream of this is of lesser interest. The mountain traverse is a popular venue for white water rafting, kayaking and river boarding; National Geographic named it one of the top 10 river trips in the world, as much for the untouched wilderness around it as for the whitewater adventure.

The rain forests that surround the river are indeed breathtaking, home to exotic species such as panthers, jaguars, ocelots and monkeys. In 1986 a rare black panther was seen about a mile from the river and jaguars have been spotted near the Haucas River Gorge. Anteaters are common as well as raccoons, river otters, iguanas, Capuchin monkeys, and sloths. Howler monkeys are found on the lower sections after the Dos Montanas canyon. Five species of snakes live in the forest; the poisonous ones include the Coral snake, the Bush Master and the Fer-de-Lance. The Laura and the Sopy Lota (a long black snake that eats poisonous snakes) are also common. The jungle frequently flashes with the bright blue color of the Blue Morpho butterfly, chestnut-mandibled toucans are common and parakeets can sometimes be seen after the Dos Montanas canyon. Other bird inhabitants include herons, hawks, ospreys and vultures.

Most of the river corridor through this wilderness is first generation rain forest that has never been touched. It is the traditional home of several groups of indigenous people. The Cabecar Indians live in the forest along the east side of the river. They are small scale subsistence farmers and ranchers, growing bananas and plantains. Although they are known to practice "black magic" they are peaceful and friendly. At one time another tribe, the Burucas Indians, lived on the other, Pacific side of the river.

The first known recreational river descent of the Pacuare was completed by Michael Cane in 1975. Three years later Cane started Costa Rica Expeditions to run commercial trips on the river and in subsequent years other commercial enterprises followed including the Explornatura Adventure Company of Turrialba with whom we were to travel. The heart pounding whitewater of the Pacuare along with its remote jungle location and warm water (65° Fahrenheit) have made it a very popular destination with adventure seekers. The mountain traverse is commonly divided into three parts, the Upper Upper, the Upper and the Lower Sections of which the more technical are the last two. The Upper section ends at Finca La Cruz and consists of about ten miles of class IV and V rapids as well as waterfalls. Our goal was the Lower Section consisting of 18 miles between the put-in at Tres Equis and the town of Siquirres. Over this distance the river drops a total of 1200ft through numerous rapids of class III and IV whitewater. It starts with a series of class III rapids but the action heats up as the Pacuare enters the Huacas River Gorge where, in addition to many class III, there are two class IV rapids called the Upper and Lower Huacas. Downstream the excitement continues with at least one more class IV



Descending Lost Canyon.



Hiking to and descending Nonequito Canyon.



The Pacuare River.

called Cimerones. The Lower Section is sometimes descended in one long day but it is more comfortably completed over two days. For these overnight trips, three campsites with lodges and canteens have been established about halfway through the Lower Section. The river is rain fed so it typically runs highest from May to January, the lowest water occurring in March and April. Though the river can be rafted all year round, the hurricane season in late summer can produce enough rain in 8 to 10 hours for the river to reach flood stage; it is then unsafe to attempt to run it.

We left Scott at the hotel in Turrialba; it was sad that he had to head home but I knew I needed to become accustomed to fending for myself. The rest of the group and I traveled by bus along a rough dirt road that dropped down to the Pacuare River at a place called Tres Equis, a name that signifies no more than a beach at which to instruct the rafters and pack supplies into the inflatable rafts. I was looking forward to my second significant whitewater expedition despite my misadventures on the River Kern in California (see "Cataracts of the Kern"). I hoped that this time I would be able to stay in the boat. There were five rafts each with five or six passengers plus one guide who sat in the back, steered and instructed. My fellow passengers were Jesus "Chewy" Guerrero who had guided us on Mexican canyoneering trips; he was accompanied by his wife. Also, sitting in front of me was Costa Rican Mauricio Odio who was a trained adventure guide. Fellow Californian Lauren Jefferis who sat behind me was a long time acquaintance with whom I had descended many canyons. It promised to be a fantastic adventure among some good friends. Though the river was somewhat swollen by recent rains, the guides had deemed it runnable though a little more exciting than usual.

The sun was shining as we set off from Tres Equis and readily negotiated the first few Class III rapids, appropriately called Bienvenidos (Welcome) and then Pelya Oho (Open Your Eyes). Other class III rapids followed in quick succession as we plunged deeper and deeper into the wilderness. I began to feel some competence and some confidence that I could stay in the boat even though I was somewhat reluctant to stick my feet as deeply as I should into the foothold pockets sown in the floor of the boat for precisely this purpose. My anxiety was caused by the possibility that an involuntary movement would torque and therefore reinjure one of my oft-damaged knees. But the day was beautiful, the company was delightful and there were moments when I could allow myself to smile. We stopped for lunch at a rocky beach where a magnificent waterfall tumbles down through the jungle into the Pacuare. Like the other meals this was a feast served on the makeshift table formed by turning one of the rafts upside down. After lunch some of us donned our rappelling gear and climbed up into the canyon above the waterfall. There we found a staircase of waterfalls and devised a canyoneering descent that dropped through some of the whitewater, though we avoided several of the most vigorous hydraulics. After this pleasant diversion we resumed our voyage down the Pacuare, through the Rodeo or Donde rapid and numerous others. Somewhere along this stretch, I had a momentary lapse of concentration while descending a fairly innocent Class III rapid. The boat unexpectedly beached on a midstream rock while I had my back to it and I

fell backwards out of the boat into a pool by the side of the river. Though I was quickly hauled back into the boat by my alert fellow crew, it was another reminder of my vulnerability to such accidents. However, there was little shock involved and I reclaimed my place with only a slightly damaged ego. The rest of the day was uneventful; we landed near our campsite in mid-afternoon and made our way up the jungle trail to our overnight campsite. This rustic facility consisted of an array of tents mounted on individual wooden platforms (designed to hold you above the ant-infested jungle floor) and a central canteen and dining area perched on the ridge overlooking a bend in the river. It was a spectacular setting and we all enjoyed an evening of good food prepared by the guides and spiced with lively conversation. The night passed pleasantly with many strange jungle sounds. However, alone in the tent without the need to pay constant attention to the swirling river, I wept quietly for my lost love.

The second day dawned with another fine meal. Soon the rafts were reloaded and we resumed our whitewater descent. Almost immediately, we passed Double Drop waterfall on the right side of the river, a signal that we were entering the Huacas River Gorge with a whole series of Class III rapids and two notorious Class IV, the Upper and Lower Huacas. I braced myself for what was to come. Several times we seemed to fly through the air only to plunge down underwater and then be jerked back to the surface. We crashed through Upper Huacas, raising our paddles into the air to celebrate that successful passage. Downstream our still-water passage passed beneath the towering Huacas waterfall that drops vertically over 100ft down a cliff on the right. Then into the roaring whitewater yet again as we surged through the Class IV Lower Huacas rapid, perhaps the most difficult of the Class IVs because of a tight move against an undercut cliff face. Soon we stopped again for lunch and I began to feel that I could complete the Pacuare adventure without any further mishap. After lunch we entered a lovely quiet section where the river meanders quietly between 100ft cliffs. An old suspension footbridge overhead reminded us of our imminent return to civilization though it lacked many of its rungs. Most of us slipped into the river to drift along with the rafts in the lovely jungle sunshine. We also took advantage of this quiet section to take lots of photographs, perhaps to remind us of the combination of simplicity and beauty that marked this adventure. Our descent of the Pacuare was almost complete. I felt invigorated and somewhat cleansed.

Downstream of the narrow, graceful gorge the rapids resumed. Upper then Lower Pinball came next with technical moves between numerous rocks. These were followed by Guatemala Rapid as the violence of the whitewater increased. Ahead lay the last big challenge, the last Class IV, the notorious Cimarones rapid with its huge hydraulics and a great black monolith in center stream that had claimed one life in the year that had just passed. Ahead we could see other rafts fly into the air and then plunge out of sight. All seemed to make it, skirting the black monolith through the awesome chute to its right. Then it was our turn. We rose once into the air and plunged deep into the whitewater. Up we flew again. Up and down yet again as we raced toward the monolith. Then, just before the chute, another deep dive, unfortunately not centered on



Cimarones Frames 1 and 2.



Cimarones Frames 3 and 4.



Cimarones Frames 5 and 6.

the hole. With the sidewise drop that ensued, I fell backwards as we crashed into the bottom of the hole. My momentum carried me out of the boat into the thundering maelstrom. The whole misadventure was captured by a series of still photos one of which shows what might have been my last moment, a single leg sticking up out of the water beside the crashing boat.

What happened next I simply do not know. Except that somehow I hung onto the lifeline that is strung along the side of the boat and, somersaulting over this, managed to haul myself back to the side of the boat as we shot down the chute, missing the black monolith by a matter of inches. I do remember not knowing what way was up and struggling to find air. Riding along the side of the boat as my friends hung onto me, we somehow made it through the rest of the

rapid. This time I was badly shaken. Yet through all that struggle, I remember thinking that it was not my time, that I needed to survive for many people some of whom had already suffered too much. It was a genuine epiphany, a moment that would always separate my past from my future. Not that I recognized this at the time for shock held my perspective to a very brief window of the future. If I were a religious man, I might believe that Doreen was telling me something important. If so the message was clear.

There is not much left to tell. Through the mists of my shock I dimly recall the last few Class III rapids: Indian Rapid with its undercut features and many channels on the right hand side that we snuck by on the left; Dos Montanas, an "s" curved rapid that feeds right into the steep and narrow canyon by the same name that was at one time going to be the site of a hydropower dam. Then the final rapid known as "Graduation" or "Boats to the Wall".

We landed at Siquirres and began the long trip home, benumbed by what had happened and yet excited about the future. Though a piece of me died several months before and a piece had been exorcised in Cimarones, there was much left to live with and hopefully much left to enjoy.

Chapter 44

EICHORN PINNACLE

“.. the greatest single event in my outdoor life ..”

Jules Eichorn in an interview with John Schagen in 1982.

Perhaps the most beautiful landscape in the world is found in the high country of the Sierra Nevada mountains in California. One of the jewels in this wonderland is Tuolumne Meadows in the heart of Yosemite National Park. John Muir happened upon this high sunlit meadow during his first summer in the Sierras and his lyrical descriptions of it began a chain of events that led to the nation and eventually the world's recognition of this and so many other special natural treasures. Tuolumne Meadows is surrounded by an array of majestic granite peaks; perhaps the most awesome of these peaks lies along the south rim of the Meadows. Muir called it Cathedral Peak and it moved him to some of his most spiritual words:

“... the wonderful mountain called Cathedral Peak is in sight. From every point of view it shows marked individuality. It is a majestic temple of one stone, hewn from living rock, and adorned with spires and pinnacles in regular cathedral style. The dwarf pines on the roof look like mosses. I hope some time to climb it to say my prayers and hear the stone sermons.”

Later in his narrative he writes

“I never weary gazing at the wonderful Cathedral. It has more individual character than any other rock or mountain I ever saw, excepting perhaps the Yosemite South Dome.”

As his first summer in Tuolumne Meadows was growing to a close, the urge to climb Cathedral Peak became irresistible and so on September 7, 1869, John Muir left his Tuolumne Meadows camp at daybreak determined to get to the

top. Approaching the peak by the route we describe below, he got near the summit though whether he actually ascended the technically demanding last 15 feet of the summit block is uncertain. There is no doubt however that the experience affected him deeply for he wrote:

“No feature, however, of all the noble landscape as seen from here seems more wonderful than the Cathedral itself, a temple displaying Nature’s best masonry and sermons in stones. How often have I gazed at it from the tops of hills and ridges, and through openings in the forests on my many short excursions, devoutly wondering, admiring, longing! This I may say is the first time I have been at church in California, led here at last, every door graciously opened for the poor lonely worshiper.”

* * *

One day in August of the year 2000, Clancy Rowley, Don Caldwell and I drove over the Tioga Pass and down to Tuolumne Meadows with the intention of climbing this storied peak. We parked at the Cathedral Lakes trailhead on the south side of the Meadows and set off up the unmarked use-trail that climbs beside Budd Creek. Hiking about 1.7 miles due south we reached a grassy meadow with a spectacular view of Cathedral Peak looming above us to the west. Here we left the stream and began the uphill climb toward a scree slope that allows steep but ready access to a shoulder saddle on the north side of the mountain. Clambering over the huge boulders that line this saddle ridge at an elevation of 10700 feet, an awesome view to the west of the peak opened up before us. In the distance lay range after range of Sierra Nevada peaks reaching to the horizon and beyond. Below us the beautiful Cathedral Lakes and their green, luxurious meadows. And over to our left, protruding starkly from the side of Cathedral was the spire, the vertical column of rock known as the Eichorn Pinnacle.

We had come this day to attempt the achievable objective of ascending the summit of Cathedral Peak, not to climb this awesome spire for we thought it beyond our climbing ability. From where we now stood on this northern saddle, we could see that our evaluation was correct. Yet it was hard to get the Eichorn Pinnacle out of our minds. But on this day, having absorbed the view, we climbed down over massive boulders on the far side of the ridge saddle and traversed across the steep rock slabs to the saddle between the Peak and the Pinnacle where another great view, this one to the south, opened up before us. Upper Cathedral Lake lay below us and, off to the southwest, stood Half Dome and the other monuments of Yosemite National Park. The sheer south face of Cathedral Peak drops down vertically below this second saddle, a drop of about 300ft before the ground flattens out. Some years later we rappelled down this face.

With a brief glance back at the Pinnacle, we then began the ascent to the summit of Cathedral Peak. The obvious route was just to the left of a sharp ridge

line and involved class 3 climbing over large boulders and rockslabs that had good friction and lots of handholds. As we approached the summit we veered left onto a series of broad ledges that lay below the summit. The summit block itself was the left-most of three towering pinnacles that loomed high overhead but was not visible until near the end of the ascent up the ridge. However, when we clambered up onto the left end of the topmost ledge, the summit block was readily identified. An easily-ascended slot just to the right of the summit block led to the last, and most difficult phase of the ascent. We paused here in the safety of the slot to prepare for this last short technical pitch to the top of the summit block. We buckled on our climbing harnesses and planned the 15ft class 4 climb to the top. At the end of the slot there were several large boulders and we wrapped one of these to anchor Clancy who would lead the climb. Thus secured Clancy then stepped out onto a narrow slot-ledge with huge exposure beneath him. Using two horizontal cracks, one for hands and the other for feet, he shuffled his way laterally for about 15ft to the relative security of a recess at the base of two vertical cracks leading directly up to the summit. These two cracks provided good holds for the class 4 climb to the top. Within a few minutes Clancy had wedged his way up these cracks and, out of our sight, was sitting on the flat rock platform, 4ft by 6ft, that is the summit of Cathedral Peak. Two solid bolts installed in this platform could be used as anchors so it was only a few minutes before Clancy had belayed both Don and I up to this airy perch. We filled all the available space on the top of the summit block.

The 10911 foot summit of Cathedral Peak provided a truly breathtaking view in every direction. It took many minutes to absorb and savor the experience of sitting on top on this awesome mountain. Every way we looked the grandeur of the High Sierra landscape was laid out before us. One cannot help but to be humbled by the magnificence of creation. But all too soon we had to descend. Using the summit platform bolts, we set up a simple 30ft rappel down the northwest face to the broad ledge below the summit block. Simple, but it was still an awesome moment when I edged off the summit platform to begin the descent. It felt like stepping off the edge of the world. Once down we traversed the broad ledge below the summit block, and in the process decided on a different route for our descent. Rather than downclimbing the ridge to the saddle between the peak and the pinnacle we descended a short way to a ledge with a stout tree. From there we recognized that there was a series of modest ledges with small, stout trees (they look like bushes) and that several rappels straight down the northwest face or rock slab would take us to a point between the two saddles from which we could readily traverse over to the talus slope on the right. Three rappels totaling about 160ft accomplished this descent and soon we had traversed over to the talus slope. From there we descended northwest and then west, down the steep, rocky slope heading for an intersection with the Cathedral Lakes Trail that was visible below us. From the bottom of the talus slope it was just a short distance through the forest to the Cathedral Lakes trail and the route home. However, before returning to the trailhead we made our way along to the shimmering Lower Cathedral Lake and paused on its shore to look back and admire our accomplishment. The water of the lake reflected the



Left: On climb to saddle (Photo by Clancy Rowley). Right: Eichorn Pinnacle from summit.



Left: Clancy on summit (Photo by Don Caldwell). Right: Cathedral Peak from meadow.



Left: Cathedral Peak and Eichorn Pinnacle. Right: Southern aspect of Cathedral Peak.

shining white rock of Cathedral Peak soaring above the lake, contrasting with dark green of the pine forest and the light green of the meadows surrounding the lake. Glittering here and there were the bright colors of the mountain flowers, sparkling in the California sun. After the rugged grandeur and excitement of the Peak, this was a very special moment indeed. It had been a wondrous day on John Muir's magnificent Peak and we savored our conquest of it for many months thereafter.

* * *

In the years that followed, Eichorn Pinnacle was a frequent topic among our group of rock climbers when the talk turned to possible future adventures. Vague plans for an attempt were often broached. We searched the literature and the internet for descriptions of the climbing route and tried to relate the grainy photographs in classics like R.J.Secor's "High Sierra Peaks, Passes and Trails" to our memories of the Pinnacle. We learned of the need to traverse around the side of the Pinnacle to the ridge on its western side where the route to the summit could be accessed. Trouble was that this traverse or horizontal pitch involved some tricky moves and enormous, increasing exposure of the order of thousands of feet. This was the route that Glen Dawson and Jules Eichorn took on July 24, 1931, when they made the first ascent of the Pinnacle. The route is now rated at just 5.4 but the fright factor is much greater due to the nature of the first horizontal traverse and its huge exposure. R.J.Secor describes the route as follows: "From the saddle between Eichorn Pinnacle and Cathedral Peak, climb down and to the right over cracks and ledges on the north side of the pinnacle. This leads to a chimney on the north side. Climb the chimney to a ledge just below the west side of the summit. A single 165-foot rope suffices for the rappel." He makes it seem easy but this is one scary adventure!

Before we could return to Tuolumne Meadows, my friend and climbing partner, Clancy Rowley, left California to pursue his academic career at Princeton but there were other young adventurers with whom I teamed up and who caught the Eichorn Pinnacle fever. So it was that one day in September, 2004, Mark Duttweiler, Derek Jackson and I set off for Yosemite National Park with copies of all the descriptions of the Eichorn Pinnacle climb that we could find. As we rose with the sun over the Tioga Pass, we caught our first glimpse of Cathedral Peak and our excitement grew at the thought of that first horizontal traverse on the Eichorn Pinnacle. Soon we were hiking up the trail beside Budd Creek, warmed by the rising heat of a beautiful, high Sierra summer day. Climbing the scree slope we watched several teams of climbers on the Southeast Buttress, seemingly just a stone's throw away. Then, reaching the north ridge we caught our first glimpse of the Eichorn Pinnacle and swallowed hard. We tried to compare the written descriptions with what we now saw before us but it was not easy to be sure of the right climbing route. With some trepidation we traversed the rock slabs to the base of the pinnacle and began to investigate the routes around the north side of the pinnacle. I now realize that at first we probed too low, perhaps because the written descriptions we had heavily emphasized

the need to start low. But it seemed clear that this simply led to steeper and less negotiable rock with dramatically increasing exposure. Derek was suffering from altitude sickness, the wind was rising and storm clouds were looming in the distance and so we began to think of abandoning our primary objective. As a final exploration, we tried a slightly higher route. Mark led to a ledge that seemed to me very much like the one of the written descriptions. It was a sloping ledge with a crack at the back next the wall. A piton with a runner had been installed in this crack about halfway along the ledge. But the ledge narrowed to nothing at the far end and there were just a few footholds there. Mark edged his way to that point and just around the corner, looking for the vertical chute that would lead up to the ridge above. But the exposure at this point is huge, the wind was blowing and there seemed to be some difficult moves that would be needed to climb the chute. Mark felt he could not install adequate protection at this point and so retreated. We then decided that we would have to come back another day. What we did not realize was that the route lay just a few feet below where Mark had stood and that it led to large rock horns that provided very reassuring protection for the subsequent vertical section.

Back at the saddle between the Peak and the Pinnacle we felt we still had time to ascend the Peak and so Mark and I set off on that route up the ridge. Our ascent essentially repeated the climb I had completed several years before and we were soon sitting on the summit block admiring the view. In the intervening years someone had removed the bolts on the summit platform that we had previously used for the descent. So this time the anchor was a little more clumsy but it was still a spectacular feeling to rappel off the summit block into that huge landscape.

Once back at the saddle between the Peak and the Pinnacle we resolved to end the day on a positive note by rappeling down the 300 foot south face of Cathedral Peak. From above it was clear that this would require a two-stage rappel. From a webbing wrap around one of the large boulders at the saddle (in the shadow of the Eichorn Pinnacle) we could rappel down about 60ft to a large shelf with two small trees that appeared to provide a solid anchor for further descent. The subsequent rappel looked much higher and might or might not be descended in a 200ft rappel. But we could also see a number of other trees, lower down on small ledges that could serve as intermediate belay stations if needed. I rappeled down first to the upper ledge to check out the second rappel. It transpired that the tree there would provide a solid anchor and that a 180 foot rappel would take us down to the bottom. Thus we all descended safely to the top of a scree slope and, after sliding down this, we hiked around the base of the Southeast Buttress to rejoin the trail back to Tuolumne Meadows. Though we had failed in this, our first attempt at the Eichorn Pinnacle, we had at least had an enjoyable climb to the summit of Cathedral Peak and a great rappel descent of the South Face. But we also resolved not to be defeated by the Pinnacle.

* * *

Another couple of years passed, during which my friend Bob Grubbs and I frequently climbed and hiked together. With similar interests and dispositions Bob and I became close friends and the talk of climbs naturally turned to the High Sierra and most particularly to the challenge of the Pinnacle. Bob's large research group in the chemistry department at Caltech had a tradition of spending a long weekend each summer in the High Sierra and some of his former students joined in the fun. In August 2006, the group met at one of the campgrounds in Yosemite and Bob and I decided that an attempt at the Pinnacle was clearly needed. One of those former students present at the camp was a young and able climber by the name of Bob Waymouth who was now at Stanford University. Bob and I agreed that Waymouth would make an excellent companion for our Eichorn outing and might even be able to lead us to the top. So early one day we drove to Tuolumne Meadows, parked at the Cathedral Lakes trailhead and hiked up beside Budd Creek. We were a little later than we would have liked but it was another spectacular High Sierra day and, with Waymouth along to lead, Bob and I were confident that we could conquer the Pinnacle in fairly short order. The scree slope was hot and we labored on our way up but arrived at the north saddle ready for our first view of the Pinnacle. It now seemed almost routine for me to traverse across to the saddle between the Peak and the Pinnacle and there don my climbing gear for yet another attempt at Eichorn's challenge.

As before we were convinced by the written reports to start low and, setting off in the lead, Waymouth initially made good horizontal progress across what appeared to me to be a sketchy and increasingly difficult horizontal route. Out of sight he found a place to anchor and belay and so called for Grubbs to follow him. Using another rope, I gave Grubbs an additional belay from behind and this seemed clearly needed as he struggled to traverse this difficult rock wall to where Waymouth had anchored. But he made it and the two of them then called on me to follow and clean the route. This I started to do but without the belay from behind that had protected Grubbs from a nasty pendulum in the event of a fall. I had proceeded about 50 feet before I began to feel excessively uncomfortable. The footholds were thin, the exposure was enormous and a pendulum fall began to be a strong possibility. For one of the few times in my climbing experience I realized that I was in real danger. I paused to try to get my equilibrium and to assess the situation. I think both Waymouth and Grubbs who were now within sight, recognized the criticality of the situation and desisted from their normal encouragement. So it was that I turned back, seriously frightened and sure that Eichorn's Pinnacle had defeated me. Thus it was that we all returned to the saddle and paused to try to recover from our efforts.

Now able to reflect on what had happened we began to recognize that we had not taken the correct route. But there was nothing below that route that looked at all possible. So the standard route must be higher; I described Mark's exploration of several years before and Grubbs resolved to have another look at it even though the hours of daylight were now dwindling and we needed to get down before dusk. Deciding on action, he edged his way along the narrowing



Left: Rappeling down the south face. Right: Starting point for the technical climb.



Left: Almost at the top of Eichorn Pinnacle. Right: On top of Eichorn Pinnacle.

ledge but, like Mark, was discouraged by the exposure and the lack of an obvious way forward or upward. Though he then retreated we were now convinced that the route lay in this direction even though we still had to find the way to progress.

But it was time to get off the mountain and we had to conclude that we had, yet again, been thwarted in our effort to climb the Pinnacle. It only remained for me to set up the rappel of the South Face and to descend to the now well-traveled trail to Tuolumne Meadows.

* * *

It was not until several years later that Bob Grubbs and Bob Waymouth and I were able to arrange yet another attempt on the Eichorn Pinnacle. Now that we were fairly certain of the correct starting point for the horizontal traverse we had confidence that we could finally succeed in reaching the summit. So it

was that early on the morning of Saturday, Aug.2, 2008, we again parked at the Cathedral Lakes Trailhead and approached Cathedral Peak along what was now a very familiar trail. It promised to be another spectacular High Sierra day and the sun was already blazing down as we trudged our way up the scree slope below the northern ridge saddle. Grubbs and I took our time, knowing that at our age, we needed to conserve our strength for the efforts ahead. We now knew that the easiest way up the scree slope was toward the south, just north of the steep rock slab known as the Southeast Buttress of Cathedral Peak. Already on this morning several groups of climbers were ascending this popular rock-climbing route. Watching them provided a good excuse to pause and get our breath. Nearing the saddle, as the boulders got huge, we veered to the right to get to the ridge top itself. As always we were taken aback by the spectacular view to the west that opened up as we broached the ridge top and were humbled by our first sight of the dramatic Eichorn Pinnacle rising almost surreally above the High Sierra vista.

We almost held our breath as we traversed across the steep rock slabs to the saddle between the peak and the pinnacle. Climbing up some boulders to this second saddle we again welcomed the sight of the distant Half Dome and the other monuments of Yosemite that seemed to stand mute witness to our puny human endeavors.

Then it was time to prepare ourselves yet again for the technical challenge. Once helmeted and harnessed and having left our belongings at the saddle, we contoured downwards from the saddle along a sloping ledge that starts about 15ft below the apex of the saddle and leads to a recess with a comfortable stance that is the starting point for the technical climb. Though other descriptions of the climb suggest two pitches (and some even suggest just one), we estimated that it might be best for us to use three short pitches. As we already knew only too well, the first and hardest on the nerves is almost horizontal. Bob Waymouth would lead. Using an anchor around a large horn beside the starting point. He climbed easily upwards to a tricky sloping ledge that has a fixed piton in the crack at the back of the ledge. There he deployed a runner on the piton and, using finger holds in the crack, eased his way down to the end of the narrowing ledge. Once there he reached down for the footholds below the level of the ledge. This is a nervy move but the footholds are large and solid; the major difficulty is the huge exposure at this point. He then stepped down again onto a short, small downward sloping ledge that led to a comfortable stance and a belay station in a small recess.

The rock horns just above this recess provide solid anchors for this belay station and there was room for all three of us as Grubbs and I in our turns completed this first pitch. Then it was time for the second, vertical pitch that has one slightly tricky move but is otherwise straightforward; several installed bolts protect that move. From the belay station we climbed above the rock horns and then up to the right to an increasingly easy chute that leads to a large ledge. The ledge has boulders that provide a good anchor for the next belay station. The last pitch proceeds up a large sloping crack that obviously leads to the summit. The easiest ascent route is along the sharp ridge to the

left of the crack and this brought us out onto the spectacular summit of the Eichorn Pinnacle, first Bob Waymouth, then Bob Grubbs and finally myself. It was a truly magnificent feeling to emerge on the summit after all the years of attempts on the Pinnacle. I paused before the last step to drink in the elation and the photograph of that moment tells its own tale as I stand perched on the edge of an abyss. The three of us knew this was a very special moment - but especially Grubbs and I whose declining physical abilities might mean that this was the apex of our climbing achievements. If so I felt I could live with that for this was an almost indescribable place on a magnificent day.

It was now time for a photographic record of this special moment, time for what we called the “hero shot”. Bob Waymouth had very kindly volunteered to take the “hero shot”, a photograph from below of Grubbs and I standing on top of the Eichorn Pinnacle. The summit was equipped with several solid bolts so we set up the 60 foot rappel down the north face to the point where we began the technical climb. Bob then rappelled down and took many “hero shots” of Grubbs and I from various points on the ridge between the Pinnacle and the Peak.

The euphoria was rampant as we pulled our rope down from the Pinnacle summit rap rings and sorted our belongings at the saddle. As we had done before we rappelled down the steep south face of Cathedral Peak to the short scree slope, loped down that and hiked around to the approach trail. It seemed like we floated down to the Cathedral Lakes trailhead, silently reveling in the triumph of our long-sought goal. As is often the case the difficulties and the failures made the final success all the sweeter. Back at camp, Grubbs and I sat under the trees with a beer. It wasn’t necessary to say anything. Indeed it seemed inappropriate to even try. We were two old men who knew this moment was very special and might not come again in our lifetimes.

Chapter 45

OF GRACE AND MAGIC

*“Though I am old with wandering
Through hollow lands and hilly lands,
I will find out where she has gone,
And kiss her lips and take her hands;
And walk among long dappled grass,
And pluck till time and times are done
The silver apples of the moon,
The golden apples of the sun.”*

From “The song of wandering Aengus” by William Butler Yeats.

It was the summer of 1978 and he did not really want to think about why he was driving for nearly three hours for a very brief dinner invitation; if he had stopped to think he would have had to conclude this was crazy. But as he sped along the busy Interstate 95 toward Guilford he could not help but think back more than twenty years to the lovely 17-year old girl with the beautiful smile that he had last seen so long ago. He knew she was married and had four daughters. He imagined she and her husband had a comfortable and affluent life in the little Connecticut coastal village of Guilford. He wondered how she (and her mother who was living with them) would react to this jarring intrusion from long ago. Would they wonder what on earth this man was doing essentially inviting himself to dinner and driving all that way for such a superficial encounter? But he did not want to think; if he thought he would have had to accept that all he wanted to do was see her just one more time and remember the love he felt for her all those years ago. But that did not seem proper for a happily married man with three children. So he choose to drive and not to think.

It had all begun many decades ago and many thousands of miles away. Begun in the small, sleepy Northern Irish village of Magherafelt. At about five years of age, they had gone together to the tiny kindergarten attached to the Rainey Endowed School in that rural village. They became friends then and

that friendship lasted throughout their school days. They had played together, children of two of the small number of middle class families in the village and members of the same Presbyterian church. She had witnessed some of his crazier exploits such as the time he jumped from a high second floor window with a home made parachute. Indeed his mother blamed her for encouraging that exploit, unfairly in her eyes. Yet, many years later he would wonder whether her sparkling laugh with its hint of devilment had not indeed encouraged this and other crazy exploits. She also remembered the time he had inadvertently ridden his bike down a steep embankment at high speed and become entangled in the barbed wire fence at the bottom, a stunt that required some 60 stitches to repair the rips to his skin.

At the age of 17 this friendship suddenly and briefly blossomed into a romantic relationship. This was short-lived for when she went off to nursing school in the big city of Belfast, they drifted apart and went on to their separate lives. He met and eventually married his Doreen; they had three children and made a life in sunny southern California. She met and married a doctor, Colin Angliker; they had four daughters and also emigrated, in their case to Canada eventually moving to Montreal. Though there was virtually no communication, they could not quite forget each other. In the boys case this was why he was driving through the rain toward the little Connecticut coastal village of Guilford.

How he came to know of her whereabouts involved a remarkable coincidence that had the essence of destiny. Strangely it came about through his academic professional interests. In the mid-1970s he and a handful of other scientists around the world became interested in the strange mechanics involved in the flow of granular materials. Through this activity he struck up a collegial and personal friendship with a professor at Magill University (in Montreal) by the name of Stuart Savage. One night in a bar at Cornell University they were enjoying a beer after a long symposium when the talk turned to Montreal. He casually remarked that a former high-school sweetheart of his now lived there. Stuart politely asked for her name and when he replied "Barbara Angliker" a look of astonishment came over Stuart's face. "She was my neighbor" he replied. So it was that he learned that Barbara and her family had moved away from Montreal, to New England and the New Haven area.

Arriving for that dinner in the late afternoon she greeted him warmly, made him feel a little more comfortable and spent some time giving him a tour of the lovely old New England home in which they lived. Then it was time to prepare dinner and her husband, Colin, returned from work to join the pre-dinner drinks. It was all very pleasant but reserved. Her mother was particularly friendly and made the situation more comfortable than it might otherwise have been. He sensed a tension and wondered from whence it came. She sat between her visitor and her mother and did not say much. Once dinner was over he recognized that perhaps it would be best if he started the long drive home. So he began his goodbyes. Getting up to leave he was a little surprised that her mother urged her to accompany him to the gate as he left. He was struck by the forcefulness of this suggestion and also by the sad look in Barbara's eyes as she said goodbye to him at the gate. Had he not been so absorbed by his own turbulent feelings

he might have understood the emotional tensions of the evening a little better.

He returned to his wife and children and got on with life. Some years later he learned from his mother and the Magherafelt grapevine that there had been a very unpleasant divorce and that Barbara now lived alone in Guilford (several of her daughters lived nearby). Occasionally he idly googled both her and her husband and found reference to the divorce and to some of his activities. When her mother died Barbara and her sister called on his mother when they carried their mother's ashes back to Magherafelt. So it was that he learned of these developments from his mother. His mother even had a photograph of that visit that showed a face that reignited that ancient affection. He took time to compose a letter of condolence to Barbara, one that seemed to resonate with her for she sent back a heartfelt response.

Again some years passed. Then he happened to be asked to participate in a technical feasibility study at General Dynamics, Electric Boat Division, in Groton, Connecticut. Groton happens to be an easy 40 minute drive east of Guilford. Again without wanting to think too much about his own motivation, he immediately wondered about whether he might visit with her again. Eventually he got up the courage to seek his wife's permission to have dinner with Barbara, permission that was granted though the underlying thoughts on both sides were not explored. However, both he and his wife were confident enough in their relationship to recognize that this was mostly him being his usual curious self and that this dinner would not have any significant consequence for their marriage.

So it was that after business one day he drove those 40 minutes to Guilford where Barbara and he had a lovely dinner in a Guilford restaurant, reminiscing about their youth and the community in which they grew up together. Another such harmless dinner occurred about a year later. Barbara would come to call these the "polite dinners". Nothing remotely inappropriate occurred during them though they both learned that they enjoyed each other's company very much. He was surprised by the extent to which that childhood friendship and shared experience were resumed after so many years.

Some more time passed before the tragic developments of the year 2007. After about 6 months of uncertain health, Doreen was diagnosed in July 2007 as suffering from colon cancer that had spread to her liver and her lungs. All possible life-extending measures were explored before the inevitable was accepted and his lovely wife, friend and companion of some 47 years passed away on Aug. 22, 2007, just a month after the diagnosis. She died peacefully surrounded by her closest family and was laid to rest beside her son in Rose Hills Cemetery in Whittier, California.

As was the case after the earlier tragedy of his son's death, he somehow managed to survive the terrible agony of that loss but only with the mutual support of his daughters, Dana and Kathy who mourned with him. However, they had other responsibilities and so he was inevitably left alone in a now bleak and lonely house, left with the life-threatening struggle of emotional survival. Sometimes he would hike into the nearby mountains after sunset and scream Doreen's name into the dark. Sometimes he would conclude that it might be

easier to end his own life, a fundamental right he believed he possessed. Always the thought of his two daughters and their children prevented his suicide. Gradually the blackness receded. Friends helped too. He began to go to work again. And in Nov.2007, he was again asked by Electric Boat to come to Groton, Connecticut. It seemed perfectly appropriate to again ask Barbara to have dinner with him. Again all propriety was observed, though this time it seemed a little different for now he was no longer married. They enjoyed each other's company very much and agreed to see each other again before too long.

Returning to California, the thought of this lovely friend of long ago kept returning often in his mind. Finally, after much thought, he decided to act. He wrote this email to Barbara:

My dear Barbara:

For a number of weeks I have thought to sit down and try to write down my thoughts regarding the two of us. But I have hesitated for a couple of reasons. First and most obviously because I recognize the possibility that my thoughts may still be somewhat jumbled by grief and conditioned by loneliness. Second because in making suggestions for the future (however indeterminate that might be) I run the risk of upsetting you and endangering a friendship newly born but anciently valued. In response to the first I argue to myself that whatever jumbling or conditioning there may be, they do not change the 50 year-old love and affection I have for you. And in response to the second I trust you will, as always, deal with me kindly and honestly.

Fundamentally, as I did 50 years ago, I want to ask you whether you see a future for the two of us beyond the friendship of one or two dinners a year, however delightful those might be. I sure hope the answer is different this time around but if it is not I will continue to enjoy and value our more distant friendship. You might ask for clarification of my meaning, but I leave that for whatever routes both of us find comfortable in following. We could think of a small start such as a long weekend somewhere away from both our homes. But maybe I go too far with even this suggestion. Most of all I want to end by telling you how much I love you and how much joy I think a deeper relationship could bring to both of us.

With much love

Chris

He waited in suspense for the next few days while, unbeknownst to him, Barbara wrestled with how to reply. She later said she exhausted the patience of her daughters in struggling with how to respond. Eventually she sent the following email in reply:

Dear Chris,

First of all let me start out by thanking you for your beautiful and very touching letter, and for sharing your thoughts so openly and honestly with me. I hope that I can always be as open and honest with you.

After my divorce I guess to some extent I built a wall around myself as protection from ever getting hurt again. It took me a long time to rebuild my self esteem, so it would be a very big step for me to allow anyone into my life again. However having said that I feel that I would like to take that step and explore the possibility of something deeper than a friendship with you and see where it takes us. I hope that you will understand and appreciate my need to take things slowly for both our sakes, but I look forward to the journey.

With love to you,

Barbara

He was ecstatic when he read that last sentence. Somehow it meant that there might be life and love left for him yet.

The “journey” as Barbara appropriately described it began at that moment. He sent her a dozen red roses with the message “For the journey”. They both expected that journey, if it continued at all, to last many months, perhaps even years. But from the start of the visit to Connecticut that followed, events and emotions seemed to have their own momentum. He was absolutely bowled over, fell in love with her again after a fifty year interruption. Was it her smile, her lilting laugh? Was it her evident sensitivity to his recent loss, her unassuming kindness and grace? Was it their shared heritage? Maybe all of these and yet these could not have been enough in and of themselves. There had to be some special, undefinable magic that drew them inevitably together. That magic made it all seem so right, so predestined. She would say that instead of taking it slowly as they had agreed to do, he moved like a freight train. But it really was not him. It was the magic that had its own momentum, its own predestined pace and that magic overtook them both. In short, love was like a sky, a heaven that crashed down all over them both.

Returning from that visit he felt like a seventeen year old - not able to think of anyone or anything but her. In short and quite unexpectedly he had fallen deeply and uncontrollably in love with this lovely, beautiful woman. He also believed those feelings were reciprocated. He went back to Guilford two weeks later and the emotions accelerated even further. He was certain then that he wanted very much to spend the rest of his life with Barbara and he hoped very much she felt the same though she was rightly a little more circumspect. Then came a break of about four weeks over Christmas and New Year. He told both of his daughters then that he might have to go back on his resolve not to get married again. During that extended break he really felt a little unbalanced by his separation from her even though they talked by phone every day. Her

magical present to him on Christmas day was to tell him (on the phone) that she loved him. He probably grinned like an idiot for the rest of that special day. To his daughters he wrote:

Barbara is a very, very special person for me. I love this lovely, gentle, kind and beautiful woman very, very much. From deep depression after Doreen's death she showed me that there might still be life and love for me and she returned the optimism and love that was born in those visits east. I know beyond a shadow of doubt that I want to spend the rest of my life with her.

Flying across the continent again in early January, they resumed their breakneck courtship. This culminated in a moment on the evening of Jan.11 when the magic cascaded up through his brain and he asked her to marry him. It was a special and almost completely impetuous decision. Though he had practiced the words of a measured proposal on the plane journey there, it was a plan for a future many weeks away when he would have had time to seek the approval of his two daughters. The moment was so impetuous that Barbara was not sure she had heard him properly and twice asked him to repeat the question. When it finally sank in her face lit up with her glorious smile and, now to his surprise, said "absolutely I will marry you!". He knew he would relive that glorious moment for the rest of his life.

Chapter 46

LEAVING ST. KILDA

“St. Kilda had stood still for centuries, a remnant of a feudal society that had long since died out on the mainland. The people themselves had stood still. They spoke a peculiar variation of the Gaelic tongue, and no one knew the reason why; they were a people who scraped a living from the seabirds that soared in the air above them.”

From “The Life and Death of St.Kilda” by Tom Steel (1975).

Out in the bleak North Atlantic, more than “forty miles from sweet bugger all” (viz. the Outer Hebrides of Scotland), there rises from the waves a tiny, cliff-ringed island whose dramatic scenery can only be matched by the remarkable and tragic story of its long-isolated people. That island was called Hirta by its residents though it is labeled on the map by the anglicized name, St. Kilda. Only a mile and a half across, this tiny island is nevertheless much larger than the nearby sea-stacks, some of which tower vertically over 1400 feet above the waves. No-one knows how and when the people got to this remote island in the first place though the archaeological evidence indicates that they were there



Left: Village Bay on Hirta. Right: Main Street.

before the birth of Christ. The language they spoke right up until the end was a strange, archaic form of Scotch/Irish Gaelic. The Vikings visited, of course, and left their mark as well as some DNA and the names of a few natural features. The island does appear on some ancient maps. But nothing was really documented until Donald Monro, the archdeacon of the western islands of Scotland, visited his islands in 1549 and penned a brief description of each, including a paragraph on Hirta. Monro wrote that the inhabitants were “simple creatures” and that their produce was “corn and girsing, namely for scheip”. He remarked that “... the seais are stark and verie evill entering in ony of the saids Iles.” But the first detailed account of the island and its people was written by a doctor by the name of Martin Martin who visited Hirta in 1695 and penned an extensive report entitled “A description of the western islands of Scotland circa 1695” (currently available in paperback from Birlinn Ltd. of Edinburgh).

Remarkably, the people of Hirta, no more than about 180 in number at any time, found a way to survive on this treeless, storm-swept speck of 1700 acres in the north Atlantic. They lived inside a protected, south-facing bay (location 57°48.797'N 8°34.111'W) surrounded by mountains whose other sides are huge vertical cliffs dropping straight down to the waves. The bay is part of an ancient volcanic crater. Prior to about 1840, the homes they built consisted of a line of stacked-stone houses with peat/thatch roofs, ranged in a circular arc a short distance above the shoreline of the bay. In 1836-38 a kind benefactor provided the means to construct a row of small but roomier cottages along the same crescent that the islanders knew as Main Street. The empty remains of these cottages (some reconstructed for use by the National Trust) as well as a number of the cruder, earlier homes now line Main Street, a somber reminder of the tenuousness of the human experience. The place has the reverence of a graveyard (there is, in fact, a small burying ground in a stone-walled enclosure behind the row of houses) and one feels the same need to tread quietly out of respect for the community that lived and died here. Because of this the nearby military base seems like a gross and thoughtless intrusion. During its lifetime Main Street was the center of St. Kildan life; each morning the menfolk would gather there to decide on the community work to be done that day (some have



Left: Main Street. Right: Main Street Parliament (photo by G.W.Wilson).

described this meeting as the St. Kildan “Parliament”). There the birding expeditions to the cliffs and sea stacks would be planned; and there the final exodus was decided upon.

The St.Kildans were a brave and hardy people with their own culture that included a strong tradition of communal sharing combined with a necessary spirit of collective but calculated risk. That risk included the danger of living off the produce from the cliffs that surrounded them, cliffs that they learned to negotiate at a very young age. When he reached manhood and had found a prospective partner among the few available, a young St. Kildan man was required to prove his courage and his potential as a provider at the so-called “Mistress Stone”. This natural feature on the cliffs of the Ruaival peninsula south and west of the village consisted of a dramatic doorway in the rock at the cliff-top with a vertical 400ft drop to the ocean below. In the words of Martin Martin who was challenged to perform this traditional feat of bravado, “... upon the lintel of this door, every bachelor-wooer is by an ancient custom obliged in honor to give a specimen of his affection for the love of his mistress, and it is thus; he is to stand on his left foot, having the one half of his sole over the rock, and then he draws the right foot further out to the left, and in this posture bowing, he puts both his fists further out to the right foot; and then after he has performed this, he has acquired no small reputation, being always after it accounted worthy of the finest mistress in the world ...” No doubt this rite-of-passage steeled the young man for his duties gathering food on the cliffs of Hirta, Stac Lee and Stac-an-Armin.

A young St.Kildan might also be dared to traverse the dramatic sea-tunnel through the headland on the north side of Hirta. To get to this remarkable natural feature he would have to hike over the 700ft saddle above the village in order to drop into Gleann More, the other main valley on the island. Passing the House of the Amazon, he would have veered to the right in order to access the relatively flat top of the Gob na h-Airde peninsula on the north side of Glen Bay. Proceeding to the cliffs at the very end of this headland he would have noticed a steep path down to his left by which to reach a narrow ledge that leads down to the tunnel entrance and to a sloping rock shelf in the tunnel itself. He might



Left: Rappeling for birds at the Gap (from film by Paul Robello & Bobbie Mann) Right: Birding haul (photo by G.W.Wilson).

even have been challenged to proceed through the tunnel though the raging seas that dominate the far eastern end may have made the exit impossible.

For sustenance the St.Kildans survived by ingenuity and daring. Though they were able with difficulty to grow some potatoes and a few vegetables, to husband a native breed of sheep and to catch a few fish, their primary nutrition came from the huge rookeries of sea birds that populated the island cliffs and nearby sea stacks. They not only gathered the eggs of the gannets and fulmars but also caught and ate the birds themselves. To do so they manufactured ropes and rappelled hundreds of feet down the cliffs of Hirta. Even more spectacularly, they made landing upon and climbed the sea stacks. Of their ropes Martin Martin wrote “ ... there are only three on the whole island, each 24 fathoms in length (about 144 ft). They are either knit together and lengthen by tying the one to the other, or used separately as occasion requires; the chief thing upon which the strength of these ropes depends, is cow hides salted, and cut out in one long piece, this they twist round the ordinary rope of hemp, that secures it from being cut by the rocks; they join sometimes at the lower end two ropes, one of which they tie about the middle of one climber, and another about the middle of another, that these may assist one another in case of a fall; but the misfortune is, that sometimes the one happens to pull down the other, and so both fall into the sea; but if they escape (as they do commonly of late) they get an incredible number of eggs and fowls.” They climbed barefoot and, in doing so since childhood, developed ankles and feet that were adapted for their tasks.

The St. Kildans used every part of the birds they caught. The birds to be eaten, whether gannets (solan geese), fulmars, puffins or other sea birds, were stored in the “cleits” that are sprinkled all over the landscape of Hirta. Cleits were small stone-walled sheds with turf roofs used for the storage of all of the St. Kildan’s goods. They had a single entrance on the uphill side and were well vented through the gaps in the stone walls to keep the stores as dry and cold as possible. The feathers of the birds were used for many purposes, in later years to pay tithes to the nominal landowners, the MacLeod of MacLeod. The oil from the fulmars was prized for its restorative powers and for lamp oil. Fulmars also formed the favorite diet of the St. Kildans though a puffin was regarded



Left: Stac Lee and Boreray. Right: Stac Lee.

as a tasty snack. Shoes, though not regularly worn by the St. Kildans, were sometimes fabricated from the necks of gannets.

It is an easy hike up the valley northeast of the village to a saddle called “The Gap” where the land drops 535ft precipitously down into the sea. This was the most convenient birding location on Hirta and was therefore the site of the ropework demonstrations featured in some of the early film accessible using Youtube. However this birding location was much less productive than the group of sea stacks that are visible across the ocean some four miles northeast of the Gap. It is a truly awesome experience to approach these sea stacks by boat. The largest, Boreray (the “Fortified Isle”), is a giant wedge-shaped projection, vertical on three sides and very steep (but grass covered) on the fourth; almost a mile long and half a mile wide, it rises to a ridge top that towers 1243ft above the ocean, as high as the top of the mast on the Empire State building. Yet the St. Kildans would row their wooden longboat over from Hirta on birding expeditions and land on Boreray. During their visits to Boreray over the years they built a “bothy” or shelter for overnight stays as well as a number of cleits in which to temporarily store their harvest of birds. Even more dramatic are the several vertical columns of bare rock separated from Boreray by just a few hundred yards of often-raging ocean. Stac Lee (the “Grey Stack”) is perhaps the most impressive; with a sea-level footprint of just 200yds by 100yds. It rises some 545ft to an awesome summit plastered white by gannets, their nests, their eggs and their guano. Stac-an-Armin (the “Warrior’s Stack”) is slightly larger, rising to a height of 627ft. As you ride the waves around these awesome rocks, it is almost impossible to visualize how the St.Kildans managed to land on these cliffs from their frail longboats. Yet they not only landed using their home-made ropes but somehow managed to climb both these spectacular monoliths. They not only climbed them (both the men and the women), but carried barrels of eggs and birds down from the summit for transport back to Hirta. Stac Lee is the most impressive climb (Stac-an-Armin has a less precipitous side) but if you look very closely you can spot a series of narrow diagonal ledges that zigzag up the southwest face and allow ascent to the sloping roof of the stack. If you look even more closely, near the top on the left side, you should be able to spot the entrance to the bothy.



Left: Stac an Armin. Right: Birding on Stac an Armin (photo by G.W.Wilson).

The St. Kildans would launch expeditions of several days to Boreray, Stac Lee and Stac-an-Armin. Normally the boat and crew would row back to Hirta and return to pick them up several days later. For such trips, the birders built small shelters called “bothies” on each of the rocks. The one on Stac Lee, a small, inclined crack high on the southwestern cliff-face, would only hold a couple of men. The one on Stac-an-Armin was a larger, free-standing structure that would hold about a dozen people crammed together for warmth. Indeed, one of the most remarkable stories of human survival occurred on Stac-an-Armin in 1727 and 1728. On Aug.15, 1727, three men and eight boys were ferried over to Stac-an-Armin for a multiple-day birding expedition. However, while they were there a smallpox epidemic broke out in the village as a result of contaminated clothing brought back from the mainland after a St. Kildan died of the disease there. The village was so decimated that the islanders were unable to man a boat to bring the birders back to Hirta. Somehow the eleven survived on the rock by drinking water from a spring, eating birds and eggs and huddling together in the bothy. Eventually, thanks to the efforts of the local land steward on the island, they were miraculously rescued on May 13, 1728, after a nine month stay on Stac-an-Armin. It says something about how the islanders were viewed by their landlords, that none of the names of the survivors were recorded.

Stac-an-Armin is remembered for one other, less fortunate event. In July of 1840, the last great auk (or “garefowl”) in the British Isles was caught on Stac-an-Armin by three birders. They tied it up and kept it alive for three days before beating it to death with a stick, because they believed it to be a witch. A few years later, in 1852, the last great auk in the world was killed and the bird became extinct.

For years I had thought to visit this extraordinary place. Finally, on Jun.29, 2012, I caught a plane out of Belfast City Airport and flew by way of Glasgow to Stornoway, the principal airport in the Outer Hebrides. There I collected a little car from the Hebrides Car Rental Company, made my way through the town of Stornoway and out onto the narrow road that runs the length of the connected islands of Lewes and Harris. With most of the day to spare, I detoured to visit the Stones at Calanais, a miniature version of Stonehenge constructed over 4500 years ago, and the Dun Carloway Broch, an Iron Age stone castle with double walls and multiple floors. Whoever occupied these ancient structures they seemed utterly beyond the known compared with the very real individuals who lived on Hirta. Continuing on through the stone and heather landscape I crossed from Lewes into Harris, drove over the narrow isthmus at Tarbert into South Harris and along the narrowing single-lane road to the tiny port of Leverburgh. There I spent the night at a lovely little bed and breakfast called Carminish House run by Pete and Val Prince; near the southern tip of Harris this has the advantage of being within easy walking distance of both the Leverburgh Pier and a pleasant restaurant called the Anchorage. Bright and early the next morning I joined the small group of about 10 booked on the day trip to St. Kilda with Sea Harris and captain Seamus Morrison. To get to St. Kilda and back in one day requires a high-speed boat like Sea Harris’s MV

Enchanted Isle, an Interceptor 42 with a cruising speed of 18 knots and a high speed of 29 knots. A very similar boat operated by a rival company, St. Kilda Cruises, was moored alongside and the two boats traveled together in a sensible and safer cruising arrangement. On that day, June.30, 2012, we were fortunate with the blue-sky weather and lucky with the relatively calm ocean; in these northern latitudes there are many days when the trip cannot be made because of the dangers involved in landing on Hirta.

Thus began a spectacular and beautiful day visit to the storied archipelago of St.Kilda. Five at a time we were ferried from the MV Enchanted Isle to the rough village jetty in an inflated Zodiac and then allowed to wander through the village and up the slopes of Hirta. I climbed to the Gap to enjoy the fantastic view over to Boreray and the sea stacks while gannets, fulmars and skuas swirled overhead. Too soon it was time to leave. We were transported back to the boat and, as the crew made preparations for the return to the mainland, I could not help but look back at the remains of the village. My thoughts were of sadness for both the village and the individuals who lived there. I tried to envisage how the last 36 island residents must have felt as they were ferried to the ship on that morning of Friday, Aug.29, 1930.

A number of factors contributed to the demise of the St.Kildan community. Increasingly over the last two hundred years, contact with the larger world brought both problems and opportunities. The younger and more adventurous saw greater opportunity elsewhere and chose to leave, to seek their fortune in the world beyond the island. Eventually, there were too few young, strong arms and too little vital energy to sustain the island community. Moreover, changing economic conditions on the mainland created unsupportable financial pressures on the island and led to untenable living conditions for the villagers. Their culture and tradition had been based on a barter system and a tradition of sharing obligations and resources. The increasing intrusion of the cash system used in the world beyond further eroded the island economy. The people of St.Kilda were too old and too few in number to adjust to the modern world. Perhaps these commercial realities were inevitable given the huge gulf between the island culture and that of the mainland. But another externally-generated malaise was not unavoidable. In the decade of the 1820s, religious upheavals and zealotry in Scotland led to a dominant over-bearing church that was very destructive to the island community. Rev. John MacDonald arrived in 1822 to minister to the population and preached 13 lengthy sermons during the first 11 days. All the inhabitants were required to attend. Moreover he returned on a regular basis, subjecting the islanders to more of the same. Some years later his successor, Rev. Neil Mackenzie, who arrived on Jul.3, 1830, continued the zealotry. He, at least, is recognized as improving aspects of the islanders living conditions. But the Rev. John Mackay who arrived in 1865 increased the zealotry and gloom. He initiated church practices that were critically detrimental to the island well-being, three-hour-long Sunday sermons at which attendance was obligatory as well as long services on the other days of the week. These impositions made substantial inroads into the time, energy and spirit that the islanders needed for their farming, birding and fishing. They also eliminated the carefree activities

that helped strengthen the spirit of the islanders. In short, organized religious zealotry was a cancer that ate away at the St. Kildan community and, along with the changing financial conditions, led to the island's inevitable demise.

But Hirta was still the only home that most of them knew and the only community in which they would ever feel comfortable. Most of them could see that the community conditions had sunk to the point where some radical change was needed. The government was unwilling to provide adequate help so that, in the end, the islanders were persuaded by the resident nurse, Williamina Barclay, that total evacuation was their only option. Of course, this was a fallacy for the government expense that would have allowed these people to remain in their homeland would have been trivial. So the 36 islanders became victims of man's inhumanity to man, victims of an insensitive government resorting to convenience. Very few survived their relocation to the mainland and all suffered unnecessarily.

As the preparations for our departure continued I could not help but reflect on how these 36 souls must have felt as they boarded the ferry boat, the SS Hebrides, on the morning of Friday, Aug.29, 1930. The Hebrides would take them far away to Oban and Glasgow. In the years ahead a few would be allowed to make brief return visits and several were granted their wish to be buried on Hirta. There are moments of grief in all of our lives and in these moments it is hard to grasp the magnitude and direction of changes that are to come upon us. I doubt that the St. Kildans could foresee the consequences of this upheaval in their lives; I had known such moments and had also been unable envisage the future. I could not help but revisit the feeling that day in Village Bay.

Chapter 47

ABROLHOS NIGHTMARE

“We saw no high land or mainland, so that this shoal is to be carefully avoided as very dangerous to ships that wish to touch at this coast ...”

From the journal of Frederick de Houtman, July 29, 1619.

The Houtman Abrolhos are a collection of tiny coral reef islands at 29°29.490'S 113°47.793'E, some 50 miles out in the Indian Ocean west of the present town of Geraldton, Western Australia. In the early 1600s, though the continent of Australia was still undiscovered, the dangerous reefs of the Abrolhos were a documented hazard to shipping. Despite this, in the small, dark hours of Jun.4, 1629, the ship “Batavia”, bound for the East Indies with 322 people on board smashed into one of those reefs. She was the newly-built pride of the Dutch East



Left: Replica of the Batavia. Right: Replica of longboat that sailed to Batavia.

India Company, 650 tons and 186 ft long. The Batavia was doomed though she stayed in tact on the reef (now known as Morning Reef) for some days allowing most of the 322 passengers and crew and large quantities of food and water to be transferred to a small nearby island in the ship's longboat and yawl. However, some 40 crew members were drowned as the ship broke up. The "Batavia" represented a huge investment for the Dutch East India Company and was loaded with treasure to be used to make an even greater profit from the spices it would carry back to Amsterdam. She had left that port at the head of a small fleet, with the expedition commander, Francisco Pelsaert, in charge while Ariaen Jacobsz served as captain of the "Batavia". Even before the wreck, Jacobsz and the expedition second-in-command, Jeronimus Cornelisz, had planned a mutiny that they hoped would make them very rich from the treasure in the hold. They recruited a number of fellow mutineers and had deliberately and surreptitiously separated the "Batavia" from the rest of the fleet. Moreover, they persuaded several of their fellow mutineers, including Jan Evertsz, to carry out a vicious gang-rape of one of the female passengers, Lucretia Jans. They hoped that this would produce an over-reaction from Pelsaert that, in turn, would allow them to entice the rest of the crew to rise up in mutiny. Pelsaert, however, shrewdly decided to wait until they reached their destination in the Dutch East Indies before resolving the matter. This intention was interrupted by the shipwreck.

At that time the mainland was an unknown, nearly-barren and waterless desert with only a sprinkling of aboriginal inhabitants; so there was no hope of rescue or succor there. Despite the huge distance, Pelsaert and Jacobsz with a number of passengers and sailors (including Evertsz) set off in the small 30ft longboat for the Dutch port of Batavia (now Jakarta, Indonesia), some 2000 miles to the north. In a remarkable feat of seamanship, they reached Batavia some 33 days later. The captain, Jacobsz, who was deemed responsible for the wreck was promptly jailed by the Governor of Batavia for his part in the planned mutiny while Evertsz was hung for his part in the rape.

Meanwhile, back in the Abrolhos, panic and chaos set in when it became clear that the water and food from the "Batavia" would only last a short time



Left: Batavia graveyard with Morning Reef behind. Right: Site of Batavia wreck (light blue spot).

and there appeared to be very few resources on the tiny island (now known as Batavia Graveyard or Beacon Island) where they had been landed. The mutineer, Cornelisz, took advantage of this chaos to establish his own murderous dictatorship, aided and abetted by the other mutineers. Once he had marshaled all the food, weapons and rescued treasure under his control, he began a systematic program of murder and rape, designed to allow the food and other resources to last as long as possible. First, he had to deal with the threat to his plans posed by a small group of soldiers who had been on board the “Batavia”. On the pretext of seeking their help to search for water on a nearby island, he had them transported there in the only remaining boat, namely the small yawl. Cornelisz promised he would come and get them when they lit a fire signaling the end of their search. However, his real plan was to let them die of thirst and hunger on that nearby island so he did not respond as promised when the signal fire was lit. However, under the leadership of one of the soldiers, a man called Wiebbe Hays, the soldiers did not panic. Though they found no water on the original island to which they had been transported (known today as East Wallabi Island) they were able to wade to a nearby island (West Wallabi) where they found not only a natural well of fresh water but also a plentiful supply of food from seals, shellfish and even small wallabies that lived on the island. A natural leader, Hays organized his small band of abandoned men so that they not only survived but prospered.

Back on Beacon Island, Cornelisz and his henchman began their program of murder and rape. All those who were not useful for their work in fishing and providing other services (including sexual services) were gradually eliminated and buried in shallow graves. This included many women and children. A few managed to escape to Wiebbe Hays’ island. In this way the soldiers became aware of Cornelisz’s horrendous pogrom and began to fashion crude weapons with which to defend themselves against the muskets and sabers of the mutineers. Cornelisz soon realized that he must make an effort to eliminate the soldiers in case any rescue vessel might turn up and reveal their horrific deeds. Hays and his men built small forts on top of the cliffs surrounding their island and fashioned catapults and pikes from driftwood material, some of which came



Left: Wiebbe Hays’ Island & assault bay. Right: Wiebbe Hays’ fort.

from the wreck. When the first attack by Cornelisz's men was launched, the soldiers were ready. They bombarded the mutineers with catapulted rocks fired from behind the fort walls so that the mutineers fled before they even reached the shore. The second assault several days later was similarly repulsed. Then Cornelisz changed tactics and sought a parley with Hays and his men. With his fully armed henchmen Cornelisz landed on the shore of West Wallabi and attempted to gain military advantage by duplicity. But as soon as Cornelisz made the first move, Hays and his men overcame the mutineers, killed some and took Cornelisz prisoner. Just at that very moment, Pelseart and his new crew appeared on the horizon in a rescue vessel; they had not only sailed south from Batavia but also managed to locate the tiny Abrolhos in the vast Indian Ocean. Both soldiers and mutineers raced from the islands attempting to be the first to reach Pelseart. The mutineers had planned to overwhelm the rescuers and take over their vessel. However, Hays and his men got there first and, thus forewarned, the rescuers overwhelmed the mutineers and took them prisoner. The horrendous pogrom of murder and rape was finally over but there had to be some consequences.

Before leaving the Abrolhos, Pelsaert carried out a rigorous investigation of what had happened in his absence. The evil of Cornelisz was soon uncovered and Pelsaert felt he was empowered to mete out just punishment rather than try to transport a large number of dangerous men back to Batavia. Gallows were erected on a nearby island for the day of reckoning. There Cornelisz was hung after having his hands cut off. Some of his henchmen were similarly butchered before being hung. Two of the younger mutineers were set free on the mainland with a few provisions but were never seen again. Other, lesser mutineers were transported back to Batavia to await trial though most were ultimately hung. Of the original 341 people on board the "Batavia", only 68 made it to their original destination.

The only real heroes of the whole terrible affair were Wiebbe Hays and his assistants; they were rewarded by the Dutch East India Company but then faded from history. The forts they built are the oldest European structures in Australia and can still be seen today on West Wallabi Island. A statue of the



Left: Rat Island. Right: Turtle Bay.

revered Wiebbe Hays, a man from very humble beginnings, stands proudly in the city of Geraldton, a symbol of his strength of character, military ability, natural leadership, and courage.

Knowledge of the wreck site was rapidly lost though the story of the “Batavia”, the mutiny and the aftermath was preserved in the meticulous records of Pelsaert and some of the passengers. The remains of the “Batavia” (including many cannons and some unrecovered treasure) lay undisturbed in shallow water for over 300 years. Eventually, in the 1960s and 70s many of these artifacts were recovered and a surviving section of the hull was raised and reassembled in the Maritime Museum in Fremantle, Western Australia. Also reconstructed in the museum was a stone archway that had been destined for the Dutch East India Company headquarters in Batavia. Excavations on Beacon Island also uncovered many human graves and confirmed their violent deaths. The exhibit in the Maritime Museum also includes many other artifacts. My visit there first brought the story to my attention. I bought a book that detailed the story and became fascinated by the saga; I simply had to see the Abrolhos for myself.

* * *

On Mar.6, 2013, I drove 300 miles north from Perth to the town of Geraldton where Geraldton Air Charters run day trips by small plane out to the Abrolhos. A total of five of us had signed up for the “Shipwreck Special” the next day. I arrived at the Geraldton Air Charters office at Geraldton Airport (28°47.71'S 114°42.11'E) about half an hour early and chatted with others in the office/waiting room. Many of the Abrolhos Islands have leased properties where fishermen have built shacks and jetties for their boats. The fishermen and tradesmen who serve them use the air charter service for quick trips back and forth to the mainland. Moreover, there is a black pearl farm and a lively rock lobster fishing business on the islands. These are also served by the air charter company. One of the waiting passengers was a carpenter on his way to repair a shack; another was a fisherman off to his shack for the long weekend.

After a pre-flight briefing by the pilot and guide, Ben Joseph, the five of us, along with a co-pilot in training by the name of Jeff Lawrie, squeezed ourselves into the little plane and prepared for an exciting trip. It was a beautiful, West Australian day, with blue skies and just enough wind to freshen the air. We flew over Geraldton at an elevation of about 3500ft and out over the Indian Ocean. Within 30 minutes we arrived at the most-southerly group of islands (the Pelsaert group) that make up the Abrolhos and the pilot took the plane down to about 500ft so that we could get a good view. After circling over several of the Pelsaert Group of islands (Post Office Island, Pelsaert Island) as well as two wreck sites (Zeewijk in 1727 and Windsor in 1908) we headed north for the middle island group, the Easter Group that includes Rat Island, almost overrun by fisherman's shacks. Then north again to the northernmost group, the Wallabi Group where the “Batavia” was wrecked and the ensuing drama played itself out. At low altitude we passed over West Wallabi Island where Wiebbe Hays and his men survived (28°27.75'S 113°41.72'E); we even spotted one of the simple rock-walled forts that they constructed and the bay where

they repelled the mutineers invasion. Then, circling to the north, we landed on the dirt landing-strip on East Wallabi Island ($28^{\circ}26.21'S$ $113^{\circ}44.15'E$) and parked the plane among low brush.

It was a beautiful day so it was a delight to disembark on this remote and pristine island. Just a short hike took us to Turtle Bay on the north side of the island, a magnificent bay and beach, where we took refuge from the sun under a small shelter. Only about 40 yards off-shore was a coral reef and we swam out with our snorkeling gear for a spectacular visit to the reef with its marvelous variety of life. This included the rockfish that are harvested on many of the other islands and shipped to mainland markets. After lunch, a short walking tour of northern point of East Wallabi Island found us a fish eagle, ospreys, and various sea birds as well as skinks, lizards, and, best of all, a collection of small wallabies, the descendants of those that sustained Wiebbe Hays and his men. Then back to the plane for another low altitude tour, this time of the islands that make up the Wallabi Group and that featured so dramatically in the "Batavia" saga. First over West Wallabi Island, Wiebbe Hays' stronghold, and then over to the Batavia Graveyard (or Beacon Island) itself ($28^{\circ}28.54'S$ $113^{\circ}47.17'E$), now the site of a number of fishermen's shacks. In the one view, we could see the relationship between the Graveyard, the nearby Morning Reef and Long Island, upon which the chief mutineers were hung in full view of the survivors of the massacre. As we circled over Morning Reef itself we could discern the precise location of the wreck (about $28^{\circ}29.39'S$ $113^{\circ}47.73'E$) since it has left a bare sandy spot (light blue in color) amid the dark sea grass just a short way behind the wave-break. It seemed an appropriate final view of the Abrolhos Islands as we turned for home after a spectacular day in a truly beautiful place. Strange to think of such horror in such a magnificent location.

Chapter 48

GREATEST CANYON OF ALL

“We are now ready to start on our way down the Great Unknown. We have but a month’s rations remaining. We have an unknown distance yet to run, an unknown river to explore. With some eagerness and some anxiety and some misgiving we enter the canyon below and are carried along by the swift water.”

Journal of John Wesley Powell for Aug.13, 1869.

What could it have been like to find yourself in this huge, seemingly endless canyon of the Colorado with no knowledge of what lay ahead? We cannot but be amazed by the extraordinary bravery, indeed foolishness, of this one-armed veteran of the Civil War as he set out into the unknown, as he ventured to traverse one of the last great unknown land areas on this earth. Even today, with almost every square inch of the Grand Canyon National Park mapped, explored, and traveled, it still an awesome feeling to set out from Lee’s Ferry to ride hundreds of raging rapids during a descent through the greatest canyon on earth. And to do so knowing that the next road to touch the Colorado is 225 miles downstream!!

During adventures in my younger days I had, of course, traveled to the Grand Canyon, even down to the Colorado River. I had watched the rafts filled with modern river runners glide by at Phantom Ranch and plunge down the notorious Lava Falls below the Toroweap Overlook. But I had never had the time or money to spend on the rafting trip down the length of the greatest canyon of all. Finally, at the age of 71, when my knees had few miles left in them, I decided to fulfill this ambition, this desire that had lingered ever since I first read Powell’s “Exploration of the Colorado River and its Canyons”. It was a spur-of-the-moment decision in the summer of 2013 when I had several

weeks without obligations. After a brief internet search, I called Grand Canyon Whitewater and asked whether they still had a space available on their 7 day motorized rafting trip through the length of the canyon. One could do a shorter motorized trip by beginning or ending at Phantom Ranch, roughly the halfway point. But these involved strenuous hikes to or from the canyon rim; moreover, if I was finally going to take the plunge, it seemed only appropriate to do the whole canyon (or at least all the exciting parts). Of course, to do the trip properly, in the manner of John Wesley Powell, one should do it in the non-motorized fashion with the smaller, oar-guided boats. But as other stories in this collection have described I seemed to have great trouble staying in the smaller boats and, in any case, the 14 day trip through the entire canyon was longer than I could manage. I had anticipated that the commercial trips, having strict limits on the number of participants, would sometimes find themselves with just one unfilled space. And so it was that the good folks at Grand Canyon Whitewater were able to accommodate me as the last, the 28th passenger on a trip leaving just 5 days after my telephone call (the motorized trips comprise two boats, each with 14 passengers and two crew).

So it was that I found myself driving the 500 plus miles to the remote hamlet of Marble Canyon, Arizona, in August of 2013. There, early on the morning of Aug.3, a motley group of 28 passengers met with the leader of the expedition, Brock DeMay of Grand Canyon Whitewater and boarded a van for the short ride down to Lee's Ferry and the banks of the Colorado River. There we met with the three other crew members, John Dunn, the helmsman of the second boat, his assistant, Ted Decker, and the volunteer helping Scott in the lead boat, Joanne Nissen. We would get to know all of them in the days that followed. Throughout the busy, hard-working seven days of the expedition they maintained a very pleasant, friendly attitude which added greatly to the enjoyment of all the passengers.

Lee's Ferry at the point where the Paria River meets the Colorado is one of the few places along this river system where it is possible to get to the shoreline without descending cliffs. The Colorado emerges from the Glen Canyon gorges very briefly before plunging back into the depths of Marble Canyon. In the pioneer days it was just about the only place where migrants and adventurers could cross the Colorado without either going far to the north or far to the south. A Mormon by the name of John D. Lee set up and operated the ferry in the early 1870s and it remained an important river crossing from the 1870s until 1928. Lee himself was executed in 1877 for his part in the Mountain Meadows Massacre. Today the road from the Marble Canyon Lodge down to Lee's Ferry follows the route of the trail on the west side. The more precipitous trail on the east side, in the Navaho Indian Reservation, has almost disappeared as a result of rock falls.

On the morning of our departure the beach at Lee's Ferry was a hive of activity as several rafting trips prepared for departure. We had been instructed to bring the minimum of personal effects packed in a small duffel bag plus a much smaller bag of stuff we might need to access during the day (such as cameras, sunscreen and light waterproof clothing). Grand Canyon Whitewater

issued each of us with a large waterproof drybag containing a sleeping bag, small pillow and groundsheet to which we added our duffel bag. This packed “night bag” was then stowed on board one of the rafts and would not be accessible during the day. We were also issued a second, small drybag for our day stuff and this we would take with us on board the rafts. Both the large and small drybags were numbered so that we, the passengers, could readily claim our own stuff when we landed for the night. A great quantity of other equipment and supplies was also firmly stowed on board including campbeds and folding chairs for each of us as well as the cooking and toilet gear. All of this had to be unloaded each evening and loaded up again the next morning; this was done with great efficiency by the four crew aided by a chain gang of passengers transferring the gear from the shore to the boats and vice-versa.

Soon we pushed away from the beach and were inexorably on our way. No way back and nearly 200 miles before we would leave the river. Almost immediately we were rollicking down our first small riffle and very soon we were drifting under the Navaho Bridges, the last vehicular crossing of the Colorado before the Hoover Dam, 350 miles downstream. The original Navaho Bridge, like the adjacent new one, vaults between vertical sandstone cliffs some 470ft above the river. Built in 1929 it is now confined to pedestrian use, vehicular traffic using the newer 1995 bridge. Relatives waved from above though it was difficult to make out faces at this distance.

Eight miles from the start we approached the first substantial rapid at Badger Creek and for the first time followed a ritual that would be repeated 100-plus times in the days ahead. We needed to check that our life-jackets were fastened and our day-packs clipped to the boat. Then to sit low along the two sides of the big raft holding onto the secure rope-holds while bracing for the cascades of river water that would envelope us. Since the air temperature during the day exceeded 100 degrees Fahrenheit, these continuous dowsings were quite refreshing but could lead to hypothermia. Hence we carried light, waterproof gear in our day-bags that would keep us dry if we so wished though I never needed mine. The rapids in a big river like the Colorado were mostly formed by flash floods from the tributaries that can deposit a mass of rock in the main river.



Left: Lee's Ferry preparations. Right: Passing under Navaho Bridges.

Over time these masses would be worn down by the main river. Though this erosion generally took many years, each of the rapids could vary substantially from year to year, even from month to month. Consequently, the river-runners knowledge of the rapids needed to be continuously upgraded and a constant “chatter” between the boatmen passed that intelligence up and down the river. Indeed, the smaller, oar-guided expeditions would land upstream to scout out the best route through each of the big rapids. The larger and more robust motorized rafts did not need to exercise such caution but were still susceptible to unexpected obstacles and unplanned difficulties. Even they could get hung up on a large rock or even capsize. Therefore we were not strapped in order to avoid being trapped in or under the raft; in the event of such an unexpected accident it was better for each passenger to float freely and independently down the rapid.

Despite their variability, the larger rapids are graded and documented in several ways. First, like other features such as campsites, trailheads and scenic highlights, they are located and even named by their distance downstream from Lees Ferry. Thus Badger Rapid was at Mile 8.0. Second their size is measured in terms of the elevation drop from beginning to end; Badger is a 15ft drop. Third, they are rated on a less objective scale of ferocity that seems to range up to a value of 10 and varies with the river flow rate; higher flow rates make some rapids more difficult and other rapids easier. In this regard, Badger Rapid is rated as a 4-6.

After lunch on the beach at Jackass Camp (Mile 8.1) just below Badger Rapid we began a long stretch of whitewater, Soap Creek Rapid (Mile 11.4, 16ft drop, rating 5-6), Sheer Wall Rapid (Mile 14.5, 9ft drop, rating 2-3), House Rock Rapid (Mile 17.1, 9ft drop, rating 4-7), North Canyon Rapid (Mile 20.7, 12ft drop, rating 4-5) and 21 Mile Rapid (12ft drop, rating 4-5). Just downstream a rock pinnacle on the right is known as “Indian Dick”. The rapids continued with 23 Mile Rapid (5ft drop, rating 2-4), 23.5 Mile Rapid (4ft drop, rating 3), Georgie Rapid (4ft drop, rating 3-7), 24.5 Mile Rapid (8ft drop, rating 5-6), and 25 Mile Rapid (7ft drop, rating 5). These last two have seen some tragedies. In 1949, on his final voyage, the legendary Bert Loper died while



Left: Badger Creek Rapids. Right: Supai Gorge.

running 24.5 Mile Rapid. His wrecked boat was found in an eddy a few miles downriver. Bert Loper was 79 years old at the time of his death. In 1889, during the first survey of the river led by Robert Stanton, Henry Richards and Peter Hansbrough flipped their wooden boat in 25 Mile Rapid and were drowned. We made another three descents before our day was done, Cave Spring Rapid (5ft drop, rating 5), 27 Mile Rapid (7ft drop, rating 5) and 29 Mile Rapid (7ft drop, rating 3); this brought the day's total to 14 major rapids with a total drop of 120ft (not counting the smaller riffles) and 29.5 Miles of the Grand Canyon. Of course, the beautiful quiet stretches of water in between the rapids also deserve mention. This was Marble Canyon which Powell described as "... of many colors - white, gray, pink and purple, with saffron tints. It is with very great labor that we make progress, meeting many obstructions... ". There are many stretches with no shore, just great vertical walls on both sides of the river. We camped for the night at such a place, Shinumo Wash Camp at Mile 29.5 at a short stretch of beach below a huge vertical cliff. We ate the first of the excellent meals prepared by the crew and set up our beds for the night in sandy spots of our own choosing. The combined effects of the heat, the excitement of all those rapids and the extraordinary setting made it difficult to sleep until the cool of the night settled in.

We awoke just before dawn and washed in the cold river; despite the substantial sediment load that caused the Colorado to run red for most of our trip (due to rains upstream in the days preceding our trip) the river is very clean biologically and posed no health hazard. After a cooked breakfast we loaded up early and were on the river by 7.45am. The morning was quiet and free of major rapids. We made stops at several notable features. First at South Canyon (Mile 31.8) we hiked up to ancient Native American ruins about 70ft above the river on the right. Native American people have lived in the Grand Canyon for at least 5000 years and a number of cultures have come and gone during that time. Evidence of their sometimes seasonal occupation can be found at a number of riverside sites within the Canyon, usually at the foot of side canyons, such as South Canyon, that allow access to the Colorado. These South Canyon pueblo ruins and the granary in a cave above them are of fairly recent vintage. However,



Left: Indian Dick. Right: At South Canyon stop.

just a few hundred yards downstream on the north side and 150ft up is Stanton's cave where ancient split-twig figurines of bighorn sheep were found, important artifacts from a hunting culture thousands of years old. Just beyond Stanton's Cave, a beautiful and bountiful spring gushes from the canyon wall about 100ft above the river and cascades down the Redwall limestone, nourishing a vibrant green garden known as Vasey's Paradise (Mile 32.2).

Just a mile beyond Vasey's Paradise is the location of a proposed dam that was, thankfully, never built for it would have flooded the canyon all the way back to Lee's Ferry. Evidence of the exploratory tunnels drilled into the rock can be seen on both sides of the river. Just beyond on the left is the gigantic cave known as the Redwall Cavern where we stopped to explore this remarkable natural feature and to play on its sandy floor. The lunch stop at Nautiloid Canyon was just a short distance downstream. A full afternoon followed beginning with 36 Mile Rapid (4ft drop, rating 4) and a brief halt to hike into the hugely overhung Redbud Alcove (Mile 39.3). The next whitewater, President Harding Rapid (Mile 44.0, 4ft drop, rating 4), ends in a large and notorious eddy on the left that collects lots of debris. In 1890, a year after he drowned in 25 Mile Rapid (some 19 miles upstream) Peter Hansbrough's skeleton was discovered here and buried. The ridge to the north is named after him. Another grave at the big eddy contains the body of 15 year old David Quigley who, in 1956, drowned over 60 miles upstream in Glen Canyon.

As the afternoon wore on the walls to the north became broken in places so that we could glimpse the North Rim in the distance. Nankoweap Rapid at Mile 52.4 is the longest in the canyon with a 25ft drop but a rating of just 1-2. We pulled into the right or north shore just downstream of Nankoweap and set up camp for the night. From there we could see Pueblo granaries that date from about AD 1100 in the cliff high above us and, before dinner, set off up the trail to see them close up. The 1/4 mile trail switchbacked up the debris slope below the cliffs and allowed us not only a close-up look at the granaries but also a truly spectacular view of the Colorado and the Canyon winding away in the distance.

Day 3 dawned bright and clear and we were on our way by 8.10am, descend-



Left: Anasazi ruin at South Canyon. Right: Vasey's Paradise.

ing Kwagunt Rapid (Mile 56.3, 7ft drop, rating 4-6) and 60 Mile Rapid (3ft drop, rating 4) before coming to the confluence with the Little Colorado River that enters from the left at Mile 61.7. In 1956 two airliners bound from LAX to the east coast collided in midair over the Canyon. Their remains are scattered in the area below the confluence. Crash Canyon at Mile 63 was named for this tragedy that took 128 lives. Lava Canyon or Chuar Rapid (Mile 66, 4ft drop, rating 2-4), not to be confused with Lava Falls far downstream, was next and here you encounter one of the less-commonly traveled trails that descend from the South Rim, namely the Tanner Trail that reaches the river at Mile 69 where Tanner Rapid (20ft drop, rating 2-4) is also located. Just a short way downstream comes the wide sweeping bend around the delta formed by the incoming waters of Unkar Creek. Here, at Mile 72.7, there are many Native American remains including those of extensive Cohoninan and Puebloan dwellings dating from the period AD 950-1150. The residents would typically spend the winter months in the canyon where they grew corn, beans and other crops. In the summer they would migrate up to the Rim to hunt and forage. Presumably the ease of the trails leading up and down from both the North and South Rims made the Unkar Delta a center of Pueblo Indian activity before the canyon was essentially evacuated in the mid-twelfth century. In the days preceding our voyage I had viewed the Unkar Delta from the North Rim; even with my binoculars I could not really make out any boats that might have been passing it. Now we stopped for a walk across the low-lying ground of the delta; shards of ancient pottery lay everywhere and presumably had lain there for at least 700 years.

Taking our places in the boats once again we prepared for a vigorous series of rapids. Unkar Rapid (Mile 72.9, 25ft drop, rating 4-7) and then Nevills Rapid (Mile 75.8, 16ft drop, rating 4-7, named for the pioneer of commercial river trips, Norman Nevills) were like appetizers leading to two big ones. At Mile 77.2, Hance Rapid (30ft drop, rating 7-8) is one of the most feared in the canyon. "Captain" John Hance, a miner and rancher, was the South Rim's first white settler and the Hance Trail which meets the river here is one of the more popular trails descending from the South Rim. The rapids named after Hance were considered the start of what Powell called "The Granite Gorge".



Left: Redwall Cavern. Right: Nankoweap Granary (photos by Jorge Tung)

Not far downstream at Mile 79.1 is another big one, Sockdolager Rapid (19ft drop, rating 5-7) with a large hole and lateral wave at the top right and large hydraulics further down. It was time for lunch and we stopped just downstream of Sockdolager Rapid on the left bank. Reinvigorated we resumed our river-running with another big one, Grapevine Rapid at Mile 82.1 that drops 17ft with a rating of 6-7. This was followed by two smaller ones, 83mile Rapid (Mile 84.1, 7ft drop, rating 3-6) and Zoraster Rapid (Mile 85.3, 5ft drop, rating 4) before we suddenly encountered “civilization” again in the form of the Kaibab Suspension Bridge.

It seemed strangely discordant to encounter human structures and activity after three days in the wilderness. A mule train was crossing the suspension bridge as we passed under it and tied up at Boat Beach where the heavily used South Kaibab Trail descends from the South Rim Village to meet the river. Here the expedition would replenish its water supply from the nearby spigots fed by the pipeline down from Indian Springs. The group all hiked to the Phantom Ranch half a mile up the Bright Angel Creek or North Kaibab trail to sample the food and drink at the Phantom Ranch Store. This is where most hikers bed down or camp during hikes down from the North or South Rim. The Ranch also serves food to hungry river-runners though almost none of us had thought to secret money in our day-bags and had to borrow from Alex who did have the foresight to do so. Many of us also enjoyed a dip in the lovely Bright Angel Creek, much warmer and more inviting than the chilly Colorado.

The day was dwindling as we returned to the boats and cast off again. After the smaller Pipe Springs Rapid (Mile 89.5, 7ft drop, rating 3) we ended the day’s voyage with another big one, the feared Horn Creek Rapid (Mile 90.8, 9ft drop, rating 7-9). Camp for the night was on the left bank at Salt Creek Camp (Mile 93) just upstream of the Salt Creek Rapid. A neat slot canyon penetrated the cliff wall just beside this beach camp.

Day 4 began with now familiar routine of breakfast and packing, increased efficiency accounting for an early cast-off at 7.50am. The morning was filled with rapids, beginning with Salt Creek Rapid (Mile 93.1, 5ft drop, rating 2) before tackling the huge lateral waves and nearby right wall of Granite Rapid



Left: Approaching Unkar delta. Right: Unkar delta from North Rim.

(Mile 93.9, 18ft drop, rating 7-8) which is visible from the South Rim. This was followed by the biggest roller-coaster in the canyon, Hermit Canyon (Mile 95.5, 15ft drop, rating 7-8) with five big waves at the foot that seemed to stand the boat on its end. The smaller Boucher Rapid (Mile 97.1, 13ft drop, rating 4-5) was then followed by the difficult Crystal Rapid (Mile 98.8, 17ft drop, rating 7-10) that has big holes near the top and a rock garden in midstream at the bottom. The succession of rapids continued with Tuna Creek Rapid (Mile 99.7, 10ft drop, rating 5-7), Lower Tuna (Willie's Necktie) Rapid (Mile 100.0, 10ft drop, rating 4), Sapphire Rapid (Mile 101.8, 8ft drop, rating 6) and Turquoise Rapid (Mile 102.6, 4ft drop, rating 2-4). Just downstream of here we spotted our first bighorn sheep grazing at the water's edge. We would see many more in this and the following days; one could not help but wonder how they negotiate the great cliffs and canyons of this awesome place. Clearly they are drawn down to the foliage growing on the narrow strip along the river bank. This includes tamarisk trees, a non-native species, that spread rapidly into the riverways of the west in the 1930s after it was imported from Asia. However, in 2004, after decades of research, tamarisk leaf beetles were released in Moab in order to control the tamarisk; they spread rapidly down the Colorado and are now killing the tamarisk and allowing native species to re-establish themselves.

The precious stone series of rapids resumed with Emerald Rapid (Mile 104.5, 4ft drop, rating 5), Ruby Rapid (Mile 105.2, 11ft drop, rating 4-5) and Serpentine Rapid (Mile 106.5, 12ft drop, rating 6) before we came to the junction with another major trail at Mile 108.3. The Bass Trail is named after William Bass who built the trail and a cableway to ferry people across the river. The Ross Wheeler steel boat, designed by Bert Loper in 1914, was abandoned by motion picture man Charles S. Russell in 1915 and remains at the foot of South Bass Trail. Just beyond this is Bass Rapid (Mile 108.4, 5ft drop, rating 3) and Shinumo Rapid (Mile 109.3, 8ft drop, rating 2-3); below the latter we stopped for lunch and and hiked 50yds up Shinumo Creek to a pretty waterfall where many of us cooled off with a natural shower. Three more rapids followed after lunch, namely 110 Mile Rapid (17ft drop, rating 2-3), Hakatai Rapid (Mile 114.4, 8ft drop, rating 2-3) and Waltenberg Rapid (Mile 112.8, 14ft drop, rat-



Left: Pottery shards at Unkar delta. Right: Boat Beach, Phantom Ranch.

ing 3-5). Then, at Mile 117.2, we stopped and hiked/climbed about 100yds up into a narrow canyon to a magical little waterfall called Elves Chasm. Almost everyone climbed a few feet up behind the falls and jumped back down into the crystal pool at its base. We tarried here for more than an hour before boarding the boats for a short drift down to the overnight camp at Mile 119.8.

Day 5 began with another early, 7.50am start. A few minutes later we landed just downstream of Blacktail Rapid (Mile 120.6) in order to hike up Blacktail Slot Canyon. Carved in the Tapeats Sandstone formation, this and other canyons in the same strata, have sculpted walls of horizontal rock slabs. About 100yds up this slot a water-filled pool and waterfall prevented further upstream exploration. We enjoyed a morning swim in the pool and then took time out to listen to an impromptu guitar concert by crew members, Ted and John. The slot created enjoyable acoustic effects.

Back afloat five more rapids were encountered in quick succession: Forster Rapid (Mile 123.3, 7ft drop, rating 3-6), Fossil Rapid (Mile 125.5, 15ft drop, rating 3-6), 126 Mile Rapid (8ft drop, rating 4), Specter Rapid (Mile 129.7, 6ft drop, rating 6), and Bedrock Rapid (Mile 131.1, 8ft drop, rating 6-8) in a sharp right hand bend with a large midstream island that we passed on our left. Some boaters have been left stranded on the island. Deubendorff Rapid (Mile 132.2, 15ft drop, rating 5-8) follows almost immediately and is a tricky one with many rocky obstacles. Just downstream we landed at Stone Creek Camp for a hike into that side canyon to another pretty waterfall, followed by lunch.

The afternoon began with Tapeats Rapid (Mile 134.3, 15ft drop, rating 4-5) and 135 Mile Rapid (10ft drop, rating 3) before we drew into the rocks off the Deer Creek confluence at Mile 136.9. This was to be the highlight of the day for Deer Creek emerges from a narrow slot high overhead and plunges vertically over 100ft into a pool beside the Colorado River. We first walked a few yards to the pool at the base of the falls and waded in to experience the violence of the substantial flow of falling water. Then we followed the trail that switchbacks up the steep rockface to the left of the falls for about 200ft before contouring into the slot canyon along one of the ledges that characterize the Tapeats Formation. The precipitous trail then continues into the slot along that ledge for several



Left: Rapids. Right: Desert Bighorn Sheep at mile 103.

hundred yards, narrowing to a nerve-wracking couple of feet in places. It is a spectacular adventure high above the stream that crashes through the slot over 50ft below the trail. Eventually, deep into the Tapeats Formation, the stream comes up to meet the trail ledge at a place known as the Deer Creek Patio. We hiked a little further upstream in Deer Creek itself, enjoying the pools and falls of the Patio and relishing the experience of this lovely place. It was almost 2.5 hours after we landed that we reluctantly took to the river again for a short voyage down to our overnight camp at the Football Field on the left bank at Mile 137.5.

After an 8am start, day six began with another smorgasbord of rapids, beginning with Doris Rapid (Mile 138.4, 5ft drop, rating 4), Fishtail Rapid (Mile 139.7, 10ft drop, rating 4) and Kanab Rapid (Mile 144.0, 12ft drop, rating 2-5), this last at the large confluence where Kanab Canyon and its trail come in from the north. It was here that John Wesley Powell ended his second canyon trip and hiked out to the north. This was followed by Matkatamiba Rapid (Mile 148.4, 3ft drop, rating 1), Upset Rapid (Mile 150.2, 15ft drop, rating 3-8) where Emery Kolb capsized in 1923, and Sinyala Rapid (Mile 154.0, 2ft drop, rating 1-2) before we approached the junction with Havasu Creek entering from the south at Mile 157.3. Havasu Rapid (3ft drop, rating 2-4) occurs right at this confluence and makes the landing just downstream of the confluence quite tricky. Still in the Tapeats formation, we ascended the ledges downstream of the Havasu confluence and contoured into that canyon, descending to the stream after several hundred yards. Hiking a little further up the streambed, we enjoyed a hour or so frolicking in the lovely travertine pools of Havasu Creek. I remembered what this was like for several years ago I had hiked down Havasu Canyon for many miles. On that occasion I had hiked as far as the beautiful Beaver Creek Falls but regretfully had to turn around there, some 5 miles short of the Colorado. I was glad that I had now reached the junction with the Colorado. Back at the boats we floated less than a mile downstream to our lunch stop on the right bank at Mile 158.



Left: Ross Wheeler Boat at Bass crossing. Right: Elves Chasm.

The afternoon began with three smaller warm-ups for the big whitewater to come, namely 164 Mile Rapid (4ft drop, rating 2), Fern Glen Rapid (Mile 168.5, 3ft drop, rating 2) and Gateway Rapid (Mile 171.9, 10ft drop, rating 3). We all knew that the biggest rapid, Lava Falls, was fast approaching and were bracing ourselves for that descent. Vulcan's Anvil, a prominent 50ft high lava plug in middle of the river, signals that the most feared rapids are not far ahead. Just upstream I was able to identify the Toroweap Overlook, 2500ft above us on the right side. Many years ago I had driven over 60 miles of dirt road to get to that spectacular viewpoint and enjoy the vertical vista around it. Moreover, I had climbed down the very rough semi-trail that leads from the Overlook to the Colorado. It had been a very tough hike (especially climbing back up 2500ft in the midday sun). Now, floating past 11 years later, I was able to discern the last section of my descent route just downstream of the Anvil. On that early expedition I had hiked along the riverbank to watch the boats descend Lava Falls. The smaller boats beached before the falls to scout out the best route, left or right of the big hole, called the Ledge Hole, in the middle of the river. On the other hand the larger boats simply went right through the Ledge Hole which would easily flip the smaller boats and occasionally the larger ones. Now I was to go through the hole myself. Holding on especially tightly, we descended into Lava falls or the Vulcan Rapid (Mile 179.7, 13ft drop, rating 8-10) as it is properly called. Formed primarily by debris flows descending Prospect Canyon, the large lateral canyon on the south side, the Ledge Hole did indeed provide the most exhilarating experience of the trip with the boat reaching its most extreme inclination. However, the run was soon over and we could look back to watch the second boat descend without incident. Another, smaller falls, Lower Lava Rapid (Mile 180.1, 14ft drop, rating 3-4) was easily run before we stopped for the night at Lower Chevron Camp on the right bank at Mile 183.

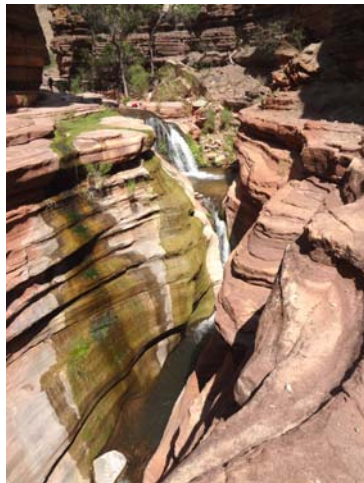
It was with a combination of regret and excitement that we awoke on this last day and prepared for our departure from the canyon. After the modest



Left: Blacktail Canyon. Right: Oar boats in Blacktail Rapids.



Left: Inner Gorge. Right: Deer Creek Falls.



Deer Creek slot canyon.



Left: Junction with Havasu Canyon. Right: Havasu Creek.



Left: Approaching Lava Falls. Right: Lava Falls trail.



Left: Lava Falls Rapid. Right: At Whitmore Helipad.

185 Mile Rapid (2ft drop, rating 2) we pulled into the left bank at Mile 187.4, the location of the Whitmore Helipad. There a wizened old employee of the helicopter company, a river legend called Garth, organized us according to our weight for the helicopter that would carry us out of the canyon and up to a ranch on the mesa to the north would only carry six, and the weight of those passengers had to be properly distributed in the chopper. Once organized we waited on this small beachhead below the cliffs for the Bell Lone Ranger 206 helicopter to arrive. It seemed quite unreal as the lone pilot flew a short distance upstream between the great sandstone cliffs before turning and setting down on the small sandy clearing that served as the Helipad. Having already said their goodbyes to the four crew members (who would be taking the boats almost 100 miles further downstream to the Pearce Ferry Take-Out where they would be disassembled and trailered back to Lee's Ferry), the first six passengers were hustled into the chopper which took off again immediately for the nine minute flight to the mesa high above us. This procedure was repeated five more times, including one flight exclusively for the baggage. The flight was truly awesome as the chopper swung downstream and rose over the edge of the great sandstone walls and then turned north for the brief flight to the Bar 10 ranch about 9

miles north of the river.

This adventure outpost was fully equipped to tend to the needs of people who had spent a week in the canyon. The hot showers were a delight and we lunched in preparation for the rest of our journey back to “civilization”. Horizon Air operates small fixed-wing flights from the dirt strip at the Bar 10 Ranch to Las Vegas and to Marble Canyon. Most of us embarked on two flights to Marble Canyon and were back where we started in about an hour.

It was a truly awesome adventure in a really unique place. We had descended more than 73 major rapids (and many smaller ones) distributed over 180 miles of river in what is still one of the most remote places on earth. In that whitewater we had dropped through about 1400ft of elevation without a single incident thanks to a highly skilled crew who not only supplied all our needs but also entertained us with poetry and song.

One can only hope that the Canyon will remain unspoiled in the centuries that come, that our grandchildren will be able to share their experience of it when they are 71 years old. Though the commercial river expeditions in the Grand Canyon may be more of an intrusion than the purists would like, the public opinion thus generated will likely aid in the Canyon’s preservation and, maybe, restoration. Hopefully, it will not be desecrated by any more construction and what is there will be trimmed. Maybe, even, the Glen Canyon Dam will be removed to return this wonderful river system to its natural state during our grandchildren’s lifetime. For as the iconic Edward Abbey has projected: if we don’t do it Nature will. In a few more centuries the dams will be filled with mud and sand, will become great waterfalls and then, as erosion does its work, will be reduced to stumps of concrete and re-bar. This is already happening to many smaller, abandoned dams in the West such as the Rindge Dam in Malibu Canyon.

Chapter 49

TORY ISLAND

*“We will never be happier anywhere else than on Tory.
We have no desire to leave our island home.
We want to stay here and hand it on to future generations.”*

Patsy Dan Rodgers, King of Tory.

There is nowhere quite like Tory Island, a bleak and treeless landscape much of which has been scraped down to the bare rock to provide soil for the fields and turf for the fireplaces. It is a place out of time, a hundred years or more, and it struggles to survive the present. Exposed to the fierce Atlantic off the northwest corner of Ireland, sea travel over the nine miles to the mainland is dangerous in the best of weather and lethal the rest of the year. Many of the tiny houses are now empty, abandoned by families fleeing to a better life. At one time the island population exceeded 500; today it is less than 100. No wonder that those that remain are a fierce, tough and independent people. They choose their own “King of Tory” to help represent their needs and aspirations (other islands of



Left: Patsy Dan Rodgers, the “King” of Tory. Right: West Village on Tory.

Ireland used to do the same but elsewhere the practice has disappeared). For the past 20 years, Patsy Dan Rodgers has been the “King of Tory” and an active and vigorous representative for the Island people. He greets every tourist as they step off the ferry, lobbies for the needs of the islanders and has initiated and promoted a school of island painting that exhibits and sells its art work around the world. I had the great privilege of spending a couple of evenings with him in the local bar that is part of the Harbour View Hotel and much enjoyed not only his company but the music of his accordion.

This remote corner is one of the small Irish-speaking regions of Ireland, part of what is known as the “Gaeltacht”. But the island is yet another step removed even from that community. Several years ago an outsider purchased a small holiday cottage on the island. He then left on an extended business trip abroad. Upon his return to Tory he found that his cottage had completely disappeared, its location now occupied by a parking lot for the local bar. The police (from the mainland) were never able to find anyone on the island who knew what had happened though many seemed to enjoy the improved access to the pub.

Other than its kind and welcoming people, the island’s greatest asset is its natural beauty. The bird life is profuse and numerous; corncrakes, peregrine falcons, choughs and ravens flourish on the land while the gulls, kittiwakes, puffins, petrels and shearwaters populate the cliffs and seashores. But perhaps the most striking natural feature are the spectacular sea cliffs along the northern coast and especially around the east end of the island. It is awe inspiring to walk along the northern cliff-top and to watch the huge Atlantic waves crash off the base of the cliffs. But the true highlight is the spectacular east end of the island known as the Dun Bhalior Peninsula. In September 2013 I made my way to the island to see this special place.

The ferry to Tory Island leaves from several mainland ports but the most convenient of these is Magheroarty (Machaire Rabhartaigh) in northwestern County Donegal. To reach this small port you drive to the village of Gortahork (Gort a Choirce) in the extreme northwest corner of Donegal. Most visitors will approach Gortahork from Letterkenny via Dunfanaghy and Falcarragh (An



Left: North coast. Right: Wishing Rock.

Fal Carrach). From Gortahork you follow the narrow coast road westwards for two miles to the coastal hamlet of Magheroarty. Note that in the Gaeltacht, many of the road signs are exclusively in Irish so it pays to memorize the Irish versions of the town names. In Magheroarty you turn left down a narrow lane leading to a pier that is readily visible from the coast road. The ferry ticket office and a small cafe are located at the base of the pier. Though the schedule changes with the season, at the time of writing the ferry for Tory leaves at 11.30am, 13.30pm and 17.00pm and returns leaving Tory at 10.30am, 12.30pm and 16.00pm. The journey takes about 40 minutes. The boat is a rugged sea-going vessel for the crossing can be very rough. On the island the ferry docks at Camusmore Harbour in the main village of An Baile Thiar (West Village) at 55°15.92'N 8°13.57'W. The one hotel (and bar) on the island, the Harbour View Hotel, is located at the head of the pier; note that it may only be open in the summer. The rooms are basic (no TV, no phone) but clean and the breakfast and bar food are good.

A single track asphalt road runs the east-west length of the island, a distance of about 3 miles. It ends at the lighthouse on the west end and at a small harbor on the east end. In addition, there may be a total of about a mile of single track dirt road. Though I did not make an accurate count there seemed to be at least 100 cars on the island, about one vehicle for every 100yds of road. That must be one of the highest vehicle densities in the world. And I didn't even count the bicycle-powered cement mixer!!! Midway along this road is the main village of An Baile Thiar (West Village) where the ferry docks. About a mile east is the smaller village of An Baile Thior (East Village). As with most of the villages in the Gaeltacht there are few people to be seen.

I set out one morning from the hotel in An Baile Thiar to explore the eastern end of the island and its dramatic sea-cliff scenery. At the end of the village I passed the little local church surrounded by gravestones inscribed in Irish and then paused at the tiny museum where some of the island paintings are stored. A small plaque dedicates the museum to "Lord Hugh Douglas-Hamilton" though why the islanders would acknowledge the British aristocracy seems to me strange indeed. A little further on, midway between An Baile Thiar and the smaller village of An Baile Thior (East Village), a World War II torpedo stands by the side of the road having been recovered from the sea, defused and erected there by the islanders. As I mused irreverently about Lord Hugh and the torpedo, I could not help but reflect in more serious vein on the psychology of the downtrodden. On how unfairly the history and associated legends are written by the conquerors. The local mythic king Balor is remembered as evil, reputedly the perpetrator of many ruthless deeds while the English butchers who committed very real atrocities on the island on a number of occasions are barely remembered. Instead there is a memorial plaque to the worthless "Lord Hugh". Where are the remembrances of the leaders who helped the island survive? I vote for a reconstructed Balor who built the spectacular fort on the west end where his people could find safe refuge. And today I vote for Patsy Dan who has done so much to cause the island to be remembered and to allow the community to survive.

As I came to the outskirts of An Baile Thior, I forked left at 55°15.64'N 8°12.72'W and continued on the road through the silent village. I could not help but wonder how many eyes watched my progress through the quiet drizzle. Perhaps that silence is the only way to survive in a land beleaguered by the conqueror and the climate. Leaving the village, the road dips down and approaches the east end of the island. There, about 20min from the start, I forked left onto a dirt road (the asphalt turns right for another hundred yards or so). A sign here describes the Black Choughs (black crow-like birds with red beaks) that inhabit this area. About 100yds along the dirt road takes you to a low saddle (55°15.42'N 8°11.69'W) narrowly separating a large inlet on the north coast called Port Challa from a bay on the south coast called Port an Duin. The road ends here but a well-worn use-trail proceeds down to the saddle and up the other side (winches at the saddle are used to transport boats between the north and south sides of the island). This narrow land-bridge leads to the large multi-pronged peninsula at the east end of Tory Island known as the Dun Bhalior Peninsula (The Peninsula of Balor's Fort), the spectacular highlight of the island, scenically and archaeologically. It is the site of an almost impregnable Early Iron Age Fort, the home of the legendary King Balor of the Evil Eye who features in many of the myths and legends of the northwest.

After the very short climb up from the Port Challa/Port an Duin saddle you access the surprisingly flat top of the peninsula. The small section of this flat-top to the south or right was the former site of a small, square fortification known as Tory Castle. Probably built in the 15th century (though coins of both the 14th and 17th century have been found nearby), this castle existed at the time of the 1608 massacre of the island population by an English army. By the 19th century only the foundations remained and nothing can be seen today (Patsy Dan is anxious to have an archaeologist excavate this site).

Turning northwards I began a clockwise tour of the peninsula. Awesome views emerged as I ascended northwards across the bare mesa atop the cliffs that line the east side of Port Challa. This is a sloping natural ramp that gradually narrows as you ascend. It was the site of ancient fields serving the fort further



Left: An Eochair Mhor from fort. Right: An Eochair Mhor from the Anvil.

north and, later, Tory Castle to the south. About 200yds up this narrowing ramp, the cliff edges on the two sides come within about 10yds of each other forming the only “gateway” to the high ground and fort beyond. Moreover, the ramp steepens here and the defenders of the fort above constructed a series of earth embankments whose outline are visible today. These defined the narrow southern boundary of Dun Bhalior and the only access to the high ground beyond. Today a short climb over these earth embankments brings you to the area of rock-strewn ground dotted with rock cairns, the site of Dun Bhalior, or King Balor’s fort at 55°15.62’N 8°11.64’W. Surrounded on three sides by 300ft vertical sea cliffs, and accessible only by the narrow gateway guarded by the earth embankments, it is a virtually impregnable stronghold, probably first occupied in the Early Iron Age though it may have been first utilized in the Late Bronze Age. Legend has it that it was the stronghold of the mythical King Balor, king of a tribe known as the Fomorians. Many stories are told of this mythical figure, King Balor of the Evil Eye. According to the 12th century annals, Balor was slain and the Fomorians driven from the mainland by the powerful Irish tribe, the Tuatha de Danaan. There is much evidence of human occupation of the fort, particularly the outlines of small, semi-subterranean huts as well as several wells. But the site is so bleak and exposed to the raw Atlantic weather that it is hard to imagine that it was used for more than a refuge. Nevertheless it is a special place, historically, archaeologically and scenically and perhaps deserves more attention than it has been given.

The highest ground just beyond the rock cairns, narrows to a dramatic point with an awesome ocean view in all directions. Here the cliffs to the east and west drop vertically for 300ft into the roaring Atlantic Ocean. From this vantage point you can see the whole of Tory Island, the lighthouse at the west end and the main village of An Baile Thiar. No one could approach the island by sea without being visible from this point. A large balanced rock on the very tip of this apex is known as the Wishing Stone or Leac na Leannan, the lover’s stone. A wish is granted to anyone foolish enough to step onto it and turn around three times or to throw three stones that end lying on top of it. The overhanging cliff beyond the Wishing Stone drops more than 90ft down to a narrow, terminal sea-stack.

Continuing the clockwise tour around the flat-top, you turn right to view another awesome sight, An Eochair Mhor, the Big Key. This long and dramatic, cliff-sided linear spur juts out from the east side of the main promontory for several hundred yards, culminating in a crag called Tormore Summit (An Tor Mor, the Big Rock) topped by a visible cairn. This remarkable, knife-edged promontory slices out into the raw ocean with cliffs on all sides and a serrated, raw rock apex only a few feet wide. The south end of the Big Key is joined to the main part of the peninsula by a very narrow ridge that accesses a slightly broader grassy area known as An Tinneoin, the Anvil (a small, oblong enclosure on the Anvil may be the remains of a lookout). Just north of the Anvil, An Eochair Mhor is interrupted by several vertical rocky pinnacles known as Balor’s Soldiers. These prevent further transit along An Eochair Mhor. Beyond this technical equipment and a strong constitution would be needed for further progress. At

the north end the Big key ends in a crag called Tormore Summit (An Tor Mor, the Big Rock) at 55°15.85'N 8°11.43'W at the top of a final 40ft vertical climb.

I did not proceed along An Eochair Mhor but stopped at the Anvil. Others have accepted the challenge to climb along the apex of the An Eochair Mhor to Tormore Summit. The first section seems easy for one can bypass the first of Balor's soldiers on the steep grassy slope on the east side of the Key. Beyond this are a number of rock climbing challenges in order to circumvent peaks along the serrated ridge. These obstacles necessitate technical equipment and the traverse culminates in that 40ft vertical ascent to the Tormore Summit. A cairn on top of the summit indicates successful ascents (the main challenges appear to be the 200ft exposure and the inclement weather). Video of a technical climb of An Eochair Mhor can be found at

<http://iain-miller.blogspot.com/2012/09/tory-island-rock-climbing-donegal.html>

Resigned and pensive I returned along the narrow ridge from the Anvil, wishing that I had brought with me a rope and a fellow climber. Resolving to return, I continued my circumnavigation of the cliff-top by contouring south around the dramatic, cliff-ringed bay between the Anvil and the main peninsula, a bay that is known as Balor's Prison. Passing through King Balor's fort once again one encounters a small well and circular depressions about 15ft across that are the remnants of huts. Further around the bay, you can look back north to see the sea-tunnel under the Anvil that connects the channel between An Eochair Mhor and the main promontory with Prison Bay.

Back at the first saddle, I turned left and followed the cliff-edge path that led down to the small harbor in Port an Duin. Only a solitary lobster pot indicated any activity in that harbor. It took less than an hour to wander back along the low-lying south coast of the island and past the torpedo to the main village and the hotel. I had seen much to occupy my thoughts along the way. Most of all, I had experienced a majestic cliff-top refuge surrounded by awesome rock and a raging ocean. Only the fear of strange, dangerous men could have induced anyone to live in this fierce place, especially given the difficulty of prying a living from the meager soil and the cold, cold sea. It is hard to understand why the English would not leave these people alone, to live out their lives in this remote, hard-scrabble place. Sometimes history is very hard to understand and almost impossible to truly comprehend.

Chapter 50

CHURCH ISLAND

*“Where you weren’t known and far from what you knew:
The lowland clays and waters of Lough Beg,
Church Island’s spire, its soft treeline of yew”.*

From “The Strand at Lough Beg” by Seamus Heaney.

These stories began in my childhood home of southeast County Derry and it is appropriate to recount the story of another hike long delayed. As a young boy one of the mystical places near to my home village of Magherafelt was an island in a small shallow lake called Lough Beg. The river Bann drains the largest lake in the British isles, Lough Neagh, starting at Toomebridge just a few miles northeast of Magherafelt. It flows north eventually reaching the sea on the north coast. But just a couple of miles north of Toomebridge it widens briefly to form a much smaller lake called Lough Beg, some 3 miles long and one mile wide. (Geologists tell us that our iconic and storied river, the Moyola, once drained into Lough Beg but that a long-forgotten flood changed its course



Church Island from the road and halfway across the marsh.

so that it now empties into Lough Neagh.)

Close to the west Coast of Lough Beg is a small island called Church Island with the ruins of an old church and a history of religious activity. Local legend has it that St. Patrick visited the island in the fifth century and, kneeling in prayer, left an imprint in a stone known as the Bullaun Stone. That stone has a hollow that holds water and today remains a object of reverence. What is better established is that a man called Thaddeus came to the island where he founded a church and monastic settlement; the traditional name for both the island and the church is Inish Taoide, Toide being Irish for Thaddeus (Thaddeus is said to be buried against the inner wall of the church). Since the Vikings sailed up the Bann on their raids of Irish settlements, it is unlikely that Inish Taoide escaped their predations. However it survived and is mentioned in the Annals of Inis Fallon in 1112 and in the Annals of Ulster in 1129. In later years the monks were of the Dominican religious order. Traces of herbs and rare mints grown by the monks for cures are still found there today. The Church on the island acted as the parish Church until it was burned down during the plantation of Ulster; by 1603 the Church was nearly in ruins. In the year 1642 the Church, already close to ruin, was taken over by the military and a regiment of soldiers was billeted there. One of the officers by the name of Payne-Fisher wrote a brief, poetic description of the church:

*To this sad Church my men I led
And lodged the living among the dead.
Without we keepe a guard within
The chancells made our magazine.
Soe that our Church thus armed may vaunt
She's truly now militant.*

Despite its ruined state, the church continued to play a role in the religious life of the local Catholic community. Mass was often celebrated within the roofless walls of the ancient Church. Close by the Bullaun Stone is a tree on which pilgrims, having prayed or made a wish, would hang a piece of cloth or other memento. Moreover Catholic burials continued there until the 1930s and gravestones are still extant. During the 1798 Rebellion, many women and children were forced to take shelter on the island. The feast day of St. Thaddeus falls on the September 7 and an annual pilgrimage to the island in honor of the Saint still takes place on the first Sunday in September.

In the 1700s the eccentric Earl of Bristol, Bishop of Derry (also known as Bishop Hervey), constructed a mansion in Ballyscullion on the County Derry side of Lough Beg. To improve his view of Church Island and Lough Beg, in 1788 he commissioned builder Michael Keenan to add a spire to the church ruins. This spire, known locally as Hervey's Folly, still stands and has become an iconic part of the Lough Beg landscape. During World War II an American aircraft based at the nearby Creagh air-base put a pronounced kink in the steeple when it hit it with its wing tip. It has since been partially straightened by the Department of the Environment.

The walls of the roofless medieval church still stand though they are in need of conservation. The building is oriented east/west and measures 52ft by 21ft with a door on the south side and windows at both ends and at the sides. The walls, built from local stone, are about 3ft thick. The church lies in the middle of a graveyard with about fifty known graves and a number of gravestones on both the north and south sides of the church (the gravestone inscriptions have been recorded). The graves include that of Michael Keenan, the builder of the steeple.

Church Island consists of seven acres of land much of which is wooded. While it was an island in the old days, the dredging of the River Bann in the 1940s created a marshy wetland between the island and the west or County Derry side of Lough Beg. This low lying wetland can be crossed by foot except when a swollen River Bann floods the marsh and water completely surrounds the island. The wetlands, known locally as The Strand, cover over 300 acres (the second largest wetlands in the United Kingdom) and have become a haven for all kinds of birds, both resident and migratory. In 1965 they were designated part of the Lough Beg National Nature Reserve and an Area of Special Scientific Interest for their diversity of plant and animal life.

Church Island always held a fascination for me. I often asked my father if he would hike to it with me but, somehow, that never happened. In the intervening years Seamus Heaney's poem by that name reminded me of that unfulfilled ambition. And so it was, some 53 years after I left Ireland, that I found myself with a couple of days to spare during a brief visit to Magherafelt. My friend Eugene Kielt, lent me a pair of waders (essential equipment for this hike) and I set off one morning determined to finally make it to Church Island.

The easiest way to get there from Toomebridge or Belfast is to leave Toome going west on the A6 and to turn right (at 54°45.882'N 6°30.127'W) onto the B182 about 1.5 miles beyond Toome. Driving north on the B152 toward Bellaghy for about 2 miles you encounter a small side road, the Ballydermot Road



Left: Nearing Church Island. Right: Inside the church.

(at 54°47.513'N 6°30.617'W) where you should turn right. After about 0.5 miles you will come to a sharp left-hand corner from which you can see Church Island and its spire in the distance. It is not easy to find a parking space here but tuck in where you can. There is a stile over the bank (at 54°47.511'N 6°30.019'W) that leads to the marsh and a sign describing the Lough Beg Nature Reserve. This is the starting point for the hike to Church Island.

Before setting out take a careful look around the Strand. A local farmer by the name of Arrell sometimes grazes his bull there. If in doubt about the bull, carry a stout stick (Eugene also lent me one of these). Absent the bull, it is still not easy to tell the best way across the marsh though the Google map view provides some clues. There is a dredged dike that runs from the nearby farmhouse on your right out in a direction to the right of Church Island. The footing along the raised bank of this dike is good but the problem is you must, at some point, leave the dike (at about 54°47.350'N 6°29.647'W) to strike out across the marsh. The footing then rapidly deteriorates (the elevation of the marsh is less than 40ft above sea level). With each footstep you will sink about six inches into the water and mud making progress slow and strenuous. One tip is to step on the clumps of reeds rather than try to avoid them. Eventually, as you near the island the footing gets better. On the return journey I took a different route striking out directly from the island toward the stile. Though still strenuous this proved a much better route. The hike across the Strand took about 30 minutes each way.

The slightly higher ground of the wooded island (highest elevation about 54ft) is surrounded by a barbed-wire fence but, if you head for the church steeple, there is an opening in the fence and a use-path through the woods and underbrush to the churchyard. A stile allows you to climb over the wall surrounding the graveyard and church (at 54°47.394'N 6°29.084'W) and worn paths allow you to access the church and gravestones. It is indeed a quiet and mystical place, shrouded in centuries of strife and tragedy. If stones could talk they would tell a myriad of stories, a miniature version of Irish history.

I thought of all the places I have been since the days of that first adventure on the Moyola. Now that my knees are finally failing me, it is possible that Church Island will be my last adventure. If so, I am satisfied for I have been privileged to enjoy some of the most beautiful places on earth while there was still some solitude to enhance them. I am also deeply grateful for the marvelous friends who have ventured with me for they lent the adventures a joy beyond measure.

As for Church Island, I hope that someday, this site will receive the attention it deserves from the conservationists. This will need to include some alternative way for visitors to get to the island. But this place is so rich in history, such an important part of the local heritage that it deserves much more attention than it has received to date. I know that if such a place was located in my adopted country, it would be regarded as a national treasure and would have been protected and maintained with far greater care than it has been given so far.